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UNITED STATES-OPEC RELATIONS

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PREPARED BY THE

CONGRESSIONAL RESEARCH SERVICE

AT THE REQUEST OF

HENRY M. JACKSON, Chairman
COMMITTEE ON INTERIOR AND
INSULAR AFFAIRS
UNITED STATES SENATE

PURSUANT TO

S. Res. 45
A NATIONAL FUELS AND ENERGY
POLICY STUDY

Serial No. 94-25 (92-115)

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National Fuels and Energy Policy Study

(SENATE RESOLUTION 45, 92D CONGRESS)

This publication is printed for the use of Senators participating in the National Fuels and Energy Policy Study, authorized by Senate Resolution 45 of the 92d Congress.

Senate Resolution 45, introduced by Senator Jennings Randolph and Henry M. Jackson, was amended and agreed to by the Senate on May 3, 1971. The resolution authorized the Senate Committee on Interior and Insular Affairs and ex officio members of the Committees on Commerce and Public Works and the Joint Committee on Atomic Energy to make a comprehensive study of programs and policies required to meet national energy needs.

Subsequently, the Senate approved the addition of ex officio members from the Committees on Aeronautical and Space Sciences, on Finance, on Foreign Relations, on Government Operations, and on Labor and Public Welfare.

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ISSUES IN U.S.-OPEC RELATIONS

Since 1969 a revolution has taken place in the energy supply system of the world and the place of the United States in that system. At the beginning of the 1970's crude oil producing facilities almost everywhere were controlled by multinational oil companies, most of them based in the United States. The number of producing countries and the number of operating companies had both grown steadily since the end of World War II, resulting in an increasingly competitive world market for crude oil; Persian Gulf prices had in 1969 fallen to an all-time low of about $1.40 per barrel. The trade association of the producer governments, the Organization of Petroleum Exporting Countries (OPEC) seemed then to be little more than an informational clearing-house and propaganda vehicle.

The United States, while it did import foreign oil, mostly from the Western Hemisphere, was effectively insulated during the Sixties from world crude oil markets. A combination of producer state production controls and strict volumetric limitations on imports stabilized domestic crude oil prices at levels in the range of $3 to $4 per barrel and preserved sufficient spare domestic producing capacity that the United States was at least potentially self-sufficient in petroleum. The most critical issue in the United States' energy policy debate in those days was whether to free the domestic oil industry from these controls, and allow prices to fall toward world levels in the interest of consumer welfare and economic efficiency.

Today, almost all the principal oil exporting countries are in the final stages of nationalizing the concessions and facilities of the multinational oil companies. Crude oil prices are dictated unilaterally by the governments of these nations, and OPEC has emerged as the steering committee of an effective producers' cartel. The export price of Arabian "marker" crude oil has risen to $11.15 per barrel. The United States is now the world's largest oil importer, and foreign oil accounts for more than 40 percent of our total supply. More than half of these imports in turn come from the Eastern Hemisphere, and the United States now imports more crude oil from Saudi Arabia than from any other country. No end is now in sight to the growth of American dependency on imported oil, and particularly on Middle Eastern oil.

These radically changed circumstances in world markets for petroleum have had a powerful impact on the world economy and on the distribution of the world's wealth and economic power. The rapid increase in world oil prices during 1973 and 1974 contributed to an acceleration of price inflation in all of the advanced market economies, and deepened a worldwide recession from which most of them are now just beginning to emerge.

For the low-income less-developed nations without oil exports, particularly those of South Asia and Sub-Saharan Africa, higher fuel prices joined with drought and crop failures to spread famine to millions and to lower the levels of living for hundreds of millions. On the other hand, several oil exporting countries with otherwise backward economies have suddenly become immensely rich; they and others have been able to step up their industrial and military development programs at a pace far faster than their most extravagant hopes of a decade ago, and in some cases far more rapidly than they can rationally manage.

Many of the elements of this upheaval had begun to emerge well before the curtailment of exports from Arab producing countries in 1973–74. At the Teheran negotiations in early 1971 the producing nations already showed more cohesion and more self-confidence than any effective combination of oil companies or oil importing country governments; it was at that time that the world price of oil first began to move up decisively. Between 1968 and 1972 Algeria, Libya and Iraq all expropriated substantial parts of the multinational companies' interests in their countries, and Saudi Arabia and other Gulf states were already beginning to talk about "participation" in production. By early 1973 both Iran and Venezuela had announced advancement of the dates on which existing oil concessions would terminate.

During the early 1960's a series of successful unilateral price actions and expropriations by different exporting nations were met with neither military action nor effective economic retaliation by the United States or other Western nations. The self-confidence and aggressiveness of the producers rapidly escalated, culminating in the Arab countries' attempted embargo against the United States and their general curtailment of oil exports to all countries in October 1973.

This action by the Organization of Arab Oil Exporting Countries (OAPEC) was not especially successful in its direct object, namely to punish the United States for its military support of Israel. The multinational oil companies were able to allocate non-Arab supplies so that the curtailment was shared proportionately by oil consumers all around the world. The United States was indeed less seriously affected by the curtailment than other countries such as Japan and Italy, which were regarded as "friendly" by the Arab governments.

The most important and lasting effect of the curtailment, however, was one which was apparently not one of its direct purposes—an almost fivefold increase in the world price of crude oil over a period of about six months. The beneficiaries of this price rise were not limited to Arab countries, or for that matter to members of OPEC, but included crude oil producers, and the producers of competing fuels, in all countries including the United States. The export reductions struck at the peak of a worldwide economic boom, in which North America, Western Europe and Japan had all been enjoying unprecedented rates of growth in real product and income. Because of this boom, petroleum consumption had increased at record rates, absorbing most of the world's surplus producing capacity, including all of the effective excess capacity in the United States.

In this situation of tight demand, the deliberate reduction of production by the Arab countries created a worldwide oil shortage (as a similar Arab action during the 1967 Seven Days War had been unable to accomplish). This shortage, compounded by panic buying and stockpiling, bid up world oil prices much more rapidly than the individual producing nations or OPEC as a group could increase their own revenues per barrel. In early 1974, a few spot sales of Gulf crude oil reached $15 per barrel or more, and there were cargoes of heavy fuel oil sold for as much as $24.

Because of the newly found cohesion and self-confidence of the exporting countries and the disarray of the importers, the high price levels decreed by OPEC in 1974 did not come down after full production was resumed. OPEC indeed was able to implement one further price increase in 1975, despite the existence of much surplus producing capacity and continual wrangling among the exporting nations over prices.

Contrary to some of the fears expressed in Western countries in 1973 and 1974, it now appears that the richer industrialized countries can live quite comfortably with oil prices at their present levels. The monetary "recycling" problem did not cause a collapse of the world financial system, and the shift of the major trading nations to floating exchange rates has, during the same period, virtually banished "balance of payments" worries from our economic vocabulary. In 1976, several leading countries, including Britain and Italy, do remain in chronic economic distress despite a general upturn in the world economy, but oil prices are only a small part of their problems.

Imports of commodities, technology and services by the oil exporting nations have outstripped all forecasts made two years ago, so that earlier projections of OPEC surpluses in the hundreds of billions of dollars now seem to be serious exaggerations. And the producer governments are not in fact buying control of large blocks of industrial, financial and real estate assets in the United States and other Western countries as many feared they would.

Finally, the inability of the Arab producing nations to carry out a selective boycott in 1973–74, plus the reemergence of significant excess producing capacity, have made a deliberate repetition of that crisis look unlikely in the immediately foreseeable future. The leveling off in the rate of oil price increases since 1974 and the failure of the most fearful scenarios to materialize have recently pushed energy issues deep into the background of public consciousness and political urgency in the United States and other advanced oil importing countries.

Nevertheless, the security and cost of imported energy continue to deserve serious concern. Despite the possibility of a gradual erosion of world oil prices in real dollar terms (if not in current dollars), there is little prospect for the "collapse" of OPEC in the immediate future. Two and at most four nations (Saudi Arabia and Iran, plus perhaps Venezuela and Kuwait) are still able, with or without OPEC, to dictate the world price of oil, so long as they can agree tacitly on the division of shut-in producing capacity among themselves.

There are, moreover, several potential groupings of nations (OPEC, all Islamic countries, the Arab bloc, or the countries of the Gulf) which could plausibly cripple the world economy with a concerted shutdown or curtailment in behalf of their political or economic de-

mands. The bulk of the world's oil reserves, and about one-third of current world producing capacity are in countries with sparse populations and large cash accumulations; these nations are arguably in an especially good position to risk cutting off all or a part of their exports. Even more plausibly, exports from the whole Middle East region might be shut off or seriously reduced as a result of sabotage or military action during a new Arab-Israeli war, even in the absence of any deliberate action by producer governments.

U.S. domestic oil and gas production continues to decline, while consumption has apparently resumed its growth after a two year pause. The outlook now is for continuing increases in oil imports and particularly imports from the Middle East, both absolutely and as a proportion of total consumption. Accordingly, the United States economy is becoming even more vulnerable to both the price and security risks of import dependency.

Over a longer period—perhaps around the end of this Century—Middle Eastern and world resources of conventional oil and gas will no longer be able to provide for ever increasing production. World oil output might "top out" even earlier if the biggest new discoveries continue to occur only in countries (e.g., Saudi Arabia and Iraq) which already have a disproportionate share of world reserves.

In the near and mid-term, the policy options for the United States in responding to these risks fall generally into five, sometimes overlapping, categories:

1. Measures to reduce energy consumption (or to slow the growth rate of energy consumption);
2. Measures to increase domestic energy production (or to slow the rate of decline in domestic production), including substitution of domestically produced for imported fuels (e.g., coal for oil as electric utility boiler fuel);
3. Measures to reduce the impact of any curtailment of oil imports: e.g., stockpiling; domestic and international sharing; emergency consumption cutbacks, allocation and rationing; and
4. Measures to broaden the world oil production base or otherwise weaken the bargaining power of the cartel; and
5. Measures to increase the economic, political and sentimental interdependence between oil exporting and oil importing nations.

What the likely future course of world oil prices will be, how serious are the risks of supply interruptions, and what is the likely effectiveness of measures which the United States might take on its own or with other consuming nations remain serious and controversial issues, whose answers are critical in evaluating policy options for the United States. The present volume has been compiled for the Committee on Interior and Insular Affairs by the Congressional Research Service of the Library of Congress to provide background on these issues to members of the Senate's National Fuels and Energy Policy Study, initially authorized by Senate Resolution No. 45 (Ninety-second Congress, Second Session). This Committee Print contains a chronology of major events in world petroleum markets, with a particular emphasis on the evolution of relations between OPEC and the United States, and a cross-section of recently published and significant or authoritative writings on these subjects.

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THE EVOLUTION OF UNITED STATES-OPEC RELATIONS

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at the Request of

Henry M. Jackson, Chairman

Committee on Interior and Insular Affairs
United States Senate

July 1976

INTRODUCTION

On October 17, 1973 the Arab members of the Organization of Petroleum Exporting Countries (OPEC) imposed an oil embargo on the United States. This action was followed by a succession of sharp increases in the price of crude oil. Western economies, including the United States, have not yet fully recovered from those shocks and are only now beginning to make adjustments to the new realities of limited availability and high prices.

Before the events of October 1973, it is doubtful that many outside of the petroleum industry and the Federal Government were aware of the existence of OPEC, and there had been little apparent reason for concern. Seemingly overnight, this cartel had been transformed from a weak and insignificant association of widely diverse and under-developed countries into one of the most powerful, influential, and wealthy organizations in the world.

The 1973 embargo was not the first to be imposed by these countries. A similar oil cutoff was agreed to by the Arab oil-producing states in 1967 as a consequence of the Six-Day War, but it was scarcely noticed by the American consumer. The second embargo was much more effective than the first because of two factors that were of primary importance in the six-year period between the two embargoes: the rapid increase in the use of petroleum products in the United States and the fact that the Arab states had the only excess producing capacity to meet the additional demand. By late 1973, therefore, the United States was far more dependent on Arab Oil than it was in 1967, just as it is now more dependent than it was in

1973. No one can say with certainty that the likelihood of an economy-shattering embargo necessarily rises with increased imports from oil-producers that are seeking political concessions of some sort, but the vulnerability unquestionably increases.

To deal effectively, therefore, with an organization so important to the future economic well-being of the United States, it is important to understand the many events that have already transpired, not just those that have received national attention.

This chronology is intended to provide perspective on the events that have shaped U.S.-OPEC policy over the past 16 years. This perspective, unfortunately, is often lost in the midst of crises, when one event or another is of particular concern. Beginning with the formation of OPEC in 1960 and tracing its relationship with the United States through early 1976, this chronology may make more apparent the evolution of policies and attitude between the two, both as friends and as adversaries. It is based primarily on events as reported in the Oil and Gas Journal and supplemented from various other news sources. A narrative of each event is provided to give an explanation, if available, for the action and reaction, as well as appropriate comments that might have been made at the time . Also included are a list of the oil groups producing and exploring in OPEC countries, a collection of statements by OPEC officials, and a compilation of selected documents concerning U.S. International Energy Policy from October 1973-November 1975.

The cooperation and assistance of Clyde Mark of the Foreign Affairs Division, Congressional Research Service, is gratefully acknowledged.

1960: Representatives of Venezuela, Saudi Arabia, Kuwait, Iran and Iraq held the first meeting of the Organization of Petroleum Exporting Countries (OPEC). Major oil companies had reduced posted prices in Venezuela in 1959 and in the Middle East in 1960. OPEC was founded to counter company control of pricing and to bargain collectively with the major oil companies.

The Corporation Venezolana de Petroleo (CVP) was formed to act as the Venezuelan Government agency in partnerships with the foreign companies operating under the service contract law. Foreign companies were responsible for the costs of exploration, but once commercial deposits were found, the companies became partners in exploitation with CVP.

1961: In January, Qatar joined OPEC.

On December 11, Iraq issued Law Number 80, which reclaimed for the Government 99% of the Iraqi Petroleum Co. (IPC) concession area. IPC was left with only the Kirkuk field. The ensuing IPC-Iraqi dispute over compensation and concession rights continued until the nationalization of June 1972.

1962: Indonesia and Libya joined OPEC in July.

1963: The field at Murban, Abu Dhabi, began production.

1964: There were new oil discoveries at Zakum, off the coast of Abu Dhabi, in the Sultanate of Oman, and at Marun, Iran.

1965: The Indonesian Government placed all oil companies under state supervision. Permina (later Pertamina), the Indonesian Government oil agency, purchased the holdings of Shell, and took over the Shell operations on Sumatra. Libya enacted a new Oil Law was enacted which stated that taxes and royalties paid to the government would be based on the posted price and not the lower market price.

1966: The restrictions on Indonesian oil companies were rescinded in December (after Suharto replaced Sukarno as President) and foreign oil companies were invited to return to Indonesia. The companies operated under a production sharing contract with the state agency, Permina.

1967: The Iraqi Government and the French company Entreprise des Recherches et d'Activites Petrolieres (ERAP) signed an agreement for the development of the North Rumaylah field, with ERAP as the contractor operating for the Iraqi National Oil Company (INOC).

On May 30, Biafra seceded from Nigeria, precipitating a civil war that lasted until January 1970, and interrupting oil production from the southeast fields. A dispute arose between Shell-British Petroleum and the rival governments over oil royalty payments.

The Suez Canal was closed and Tapline was shut down during the Arab-Israeli fighting which began on June 5 (Tapline reopened in 1968). Arab oil ministers, meeting in Baghdad on June 6, agreed to stop all oil shipments to states friendly

1967: to Israel. Iraq, Kuwait, Saudi Arabia, Libya, and Algeria stopped oil shipments to the United States, West Germany, and the United Kingdom. The Soviet Union offered to supply oil to any European state during the Arab Embargo, but withdrew the offer on June 20. On June 17, Israel announced that it would begin operating the Italian-Egyptian oil fields in the occupied Sinai Peninsula. At an August meeting in Khartoum, Sudan, Arab leaders agreed to leave decisions on the oil embargo up to each state; most of the Arab states had resumed shipments by the first of August.

All American-owned firms operating in Algeria were put under state supervision on June 6. Algeria nationalized five American-owned oil distributing and refining companies in August.

1968:

January 4: Kuwait, Saudi Arabia, and Libya formed the Organization of Arab Petroleum Exporting Countries (OAPEC).

May: Venezuela opened the bidding on the concession area of southern Lake Maracaibo under the revised service contract formula. The final contracts, signed by Continental, Mobil, and Shell in July 1971, called for a royalty of 6-1/6% on 90 % of the production, with 10% of crude production to go to the state company, CVP and a 60% tax rate on company profits.

May 14: Algeria nationalized 14 foreign firms (12 French and 2 British-Dutch) involved in oil and gas distribution and delivery.

August 21 : Iraq and IPC agreed to reopen negotiations on the status of IPC concessions.

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1968 (Cont'd)

September 26: Oil companies operating in Algeria revised their sales contracts by raising prices after the Algerian Government imposed a ban on the export of oil at reduced prices.

October 19: Getty Petroleum signed a contract with Sonatrach, the State company of Algeria, to cede 51 % of Getty interests to the Algerian Government in return for a release from Government sequestration.

October 20: Libya announced an agreement with the oil companies for a revised royalty calculation formula and for payment of taxes 30 days after the end of each quarter.

December 8: The Libyan Government announced the adoption of a regulation to control the conservation of petroleum resources.

December 10: OPEC made public the resolutions passed at its November meeting calling for coordination among the members of pricing policies and regulation of conservation.

December 11: The French Government (ERAP-ELF) group meeting in Algeria agreed to raise crude oil prices and to review prices monthly.

1969:

February 21: Algeria told French oil companies that the 1965 agreement for export reference prices would be considered provisional. Franco-Algerian negotiations to revise the 1965 tax reference prices began on November 24.

March 3: Four American-owned oil companies operating in Algeria raised their posted prices.

1969 (Cont'd)

March 14: The Iranian Government told the consortium to raise revenues by 17% within two months. On May 15, the consortium and the Government announced a new agreement for an increase of $1.01 billion in revenues, derived from a 10% increase in production and a 12% increase in income payments.

March 24: Algeria voided the Sinclair concession after Sinclair merged with Altantic Richfield.

May 30: Shaykh Ahmed Zaki Yamani, Saudi Minister of Petroleum, said in Beirut that the oil producting states should try to maintain the oil price structure, should assume greater roles in oil operations through national companies, and should participate in downstream operations. He did not advocate complete nationalization, however, fearing that in case of nationalization, the national oil companies of the producing coutries will enter into competition on the world market and prices will fall to $1/bbl in the gulf.

July 23: El Paso Gas of the United States agreed to buy $1 billion in liquefied natural gas (LNG) from Algeria. El Paso and Sonatrach, the Algerian state oil company, signed the agreement on October 9.

August 7: Libya opened negotiations with the oil companies to raise posted prices by 10 cents per barrel, from $2.21 to $2.31.

September 25: Iraq warned the Iraq Petroleum company that unless production was raised, Iraq would take over the oil industry.

1969 (cont'd)

October 12: The Libyan Petroleum Ministry announced that the oil companies had agreed to begin negotiations on the price of crude. After the coup d'etat of September 1, the new Government continued the campaign begun by the Monarchy to win higher posted prices for Libyan crude.

October 26: The Shah of Iran said that if the United States increased its imports of Iranian oil, Iran would spend the money earned from the sales on American goods.

December 16: OPEC ended its 3-day meeting in Qatar. The subjects under discussion at both the Qatar meeting and the Vienna meeting, in July were participation, Algerian negotiations with France, and member control over production programs. Algeria became a member.

1970:

January 7: National oil companies of Algeria, Libya, Iraq, and Egypt ended a 3-day meeting at which they discussed their policies toward foreign monopolies operating in their countries.

January 20: Lybian Oil Minister Izz al-Din al-Mabruk met with representatives of the 22 companies operating in Libya to begin negotiations to raise the posted price of crude. When the negotiations stalled in April, Colonel Muammar al-Qadhdhafi, Chairman of the Revolutionary Command Council, said that if the companies remained intransigent, Libya would take unitateral action. A new round of negotiations began on May 6, after Libya rejected the price increase of Esso (Exxon) and Occidental.

1970 (cont'd)

February 12: Iraq announced the cancellation of Article 3 of Law No. 80 of 1961, which allowed the Government to allocate other lands to the IPC in lieu of the concession areas expropriated under the law.

March 14: A 3-day meeting between the National Iranian Oil Company (NIOC) and the consortium ended, to be resumed in one month to allow time to consider the various proposals. A second meeting ended on April 20 without reaching an agreement. On May 6, an Iranian Ministry of Finance communique said that the negotiations had been successfully concluded.

March 15: The Libyan Revolutionay Command Council announced the formation of the Libyan National Oil Corporation (Linoco). On July 5, Linoco took over all oil and gas distribution in Libya, and announded that the companies would be paid compensation for their nationalized holdings.

March 16: An American firm, Distrigas Corporation, a subsidiary of the Cabot Corporation, signed a long term contract for Algerian LNG.

May 20: The 1965 agreement between Kuwait and Saudi Arabia to divide the Neutral Zone between their two countries went into effect.

1970 (cont'd)

May 23: Oil Ministers from Libya, Algeria, and Iraq issued a communique stating that they would set time limits on the negotiations with the companies, realize their demands by unilateral action if necessary, and establish a joint fund in case of a confrontation with companies.

June 8: The Shah of Iran said that profits are not made at the wellhead but downstream, and that the present system of exploiting companies must disappear.

June 12: The Libyan Government reduced the amount of production of the Occidental Oil Company from 800,000 barrels per day to 500,000 b/d. In the next two months, Libya cut the production of Texaco-Chevron by 100,000 b/d, Oasis by 150,000 b/d. Esso by 110,000 b/d. Mobil by 40,000 b/d. and Occidental, again, by 60,000 b/d. Oil Minister Mabruk said the cuts were for conservation purposes, and were not intended to pressure the companies into accepting the Libyan price increases.

June 15: Algeria nationalized the holdings of Royal Dutch-Shell, Elwerath, and Phillips. Phillips signed an agreement for compensation on August 4, and Royal Dutch-Shell accepted compensation on November 19.

June 24: Algerian President Boumedienne told the opening session of the OPEC meeting that the producing and consuming countries should have direct contacts and that the companies should be bypassed.

1970 (cont'd)

July 21: Algeria raised the tax reference price of CFP crude from $2.08 to $2.85, retroactive to January 1969. France rejected the price rise on July 22 and requested for arbitration as called for in the Franco-Algerian agreement of 1965.

August 30: Iraq announced the signing of an agreement with Soviet Techno-export for the development of the North Rumaylah field. Iraq and France had signed a similar agreement in 1967.

September 4: Occidental agreed to raise the posted price of Libyan crude by 30 cents per barrel, from $2.23 up to $2.53 and to pay a 5% surtax on exports. By October, Esso, Oasis, Mobil, and BP had accepted similar price increases, and production was restored to the pre-June levels.

September 9: It was reported from Iran that the consortium had agreed top raise crude production by 200,000 barrels per day, but on October 6, the Shah warned the oil companied either to increase production or face the consequences.

September 28: Exxon and BP said the posted price of Iraqi crude would be increased by 20 cents per barrel, up to $2.41. Within days, Shell and CFP also raised their posted price by 20 cents.

October 27: The Iraqi Government announced the signing of an agreement with the Iraq Petroleum Company and its subsidiaries, Mosul Petroleum Company and Basrah Petroleum Company,

1970 (Cont'd)

October 28: which raised annual production of crude oil from the southern Iraq fields from 16 million tons up to 21 million tons in 1970, and up to 28 million tons in 1971, with annual increases of 4.5 million tons thereafter.

October 28: BP announced that posted prices on crude shipped from Bandar Mah Shar, Iran, would be increased from between 2 cents to 10 cents per barrel. On November 16, the consortium announced that the posted price of Iranian crude would be raised by 9 cents per barrel, and that the tax rate would be increased to 55 %.

November 12: Algeria nationalized the holdings of Mobil and Newmont Overseas Oil. Mobil spokesmen said that compensation had been agreed upon prior to the nationalization decree. Newmont said it would contest the nationalization. On November 13, Algeria nationalized Atlantic Richfield holdings and announced that compensation would be paid.

November 22: Iraqi Oil Minister Sadun Hammadi said that IPC should raise the tax rate to 55 % and the posted price by 9 cents, following the Iranian example of November 16.

November 24: The Kuwait Oil Company raised the posted price by 9 cents, from $1.59 to $1.68 per barrel and raised the tax rate to 55%.

December: The new Venezuelan tax law raised the tax rate on company profits from 52% to 60%, and gave the President the right to raise posted prices without negotiations with the companies.

1970 (cont'd)

December: Pertamina, the Indonesian Government oil company, and Pexa Oil of Australia signed a production sharing contract calling for 73.75% of the proceeds from production (compared to previous Pertamina share of 65%) and a 25 % working interest in the Kalimantan concession for the Government.

December: OPEC announced its decision to set 55% as the minimum tax rate on net income, and to work toward substantial increases in the price of crude oil. The OPEC meeting in Venezuela began on December 9.

1971

January 12: Negotiations began in Teheran between Kuwait, Abu Dhabi, Saudi Arabia, Iraq, Iran, and Qatar and representatives of the 22 companies operating in the countries, over tax rates and posted prices. When the talks stalled in early February, spokesmen for the countries threatened to raise prices unilaterally or to impose a total embargo.

Feburary 14: Oil company negotiators issued a statement in Teheran announcing a 5-year agreement between the companies and Abu Dhabi, Iran, Iraq, Kuwait, Saudi Arabia, and Qatar, which called for a stabilized tax rate of 55% on Persian Gulf crude, a fixed price increase of 35 cents per barrel, a crude-quality graduated price scale accordint to API gravity, four incremental price rises of 2-1/2 % for inflation, and four incremental price rises of 5 cents per barrel.

1971 (cont'd)

February 23: Libya, also representing Saudi Arabia, Iraq, and Algeria, began negotiations with oil companies on adjusting the posted prices of Mediterranean crude.

February 24: Algeria nationalized all French assets in gas pipelines and 51 % of French assets in other oil operations. During the subsequent Franco-Algerian negotiation, French spokesmen said they did not mind the nationalization but wanted the 49 % French share paid in crude oil. When the negotiations stalled in April, Algeria demanded payment for crude oil prior to shipping, and raised the price from $2.85 to $3.60 per barrel. France broke off negotiations and started a boycott of Algerian oil.

April 2: Libya and the companies operating in the country signed the so-called Tripoli Agreement, which raised the posted price of crude by 90 cents, up to $3.45 per barrel, and raised the tax rate to 55%.

April 26: Nigeria formed a state oil company, the Nigerian National Oil Company (NNOC), was to participate with the French firm (ERAP-ELF) in four Nigerian fields. NNOC was to hold a 35 % interest in the operation.

June 7: The OAPEC meeting in Kuwait ended in dispute over the membership application of Iraq, according to reports.

June 7: Iraq and IPC agreed to raise posted prices of crude by 80 cents per barrel, up to $3.21. IPC also agreed to loan the Iraqi government $30 million and to postpone for four years the repayment of the previous loan of $60

1971 (Cont'd)

June 7: million. On June 10, Iraq revived its claim for 20% participation in IPC.

June 23: Aramco signed an agreement with Saudi Arabia, which raised posted prices of Ras Tanura crude up to $3.18 per barrel and raised the tax rate to 55%.

June 30: The Algerian state company Sonatrach and the French state company CFP agreed to a $50 million compensation for the 51% of French-owned property nationalized in February. France ended the boycott against Algerian oil.

September 14: Oman cancelled the Phillips concession because the company did not fulfill all conditions under which the concession was granted. Oman's new reformist government came to power in July 1970.

September 22: OPEC passed resolutions (made public on October 7) calling for the members to seek participation in their concessions, and to seek compensation for the devaluation of the dollar. (The devaluation was announced in August 15.) Negotiations on devaluation compensation began in Teheran on October 30. Nigeria was admitted to membership in OPEC.

December 7: Libya nationalized the British Petroleum Company operating in Libya because, Libya clained, the British conspired with Iran's in its November 30 seizure of three islands in the Straight of Hormuz. Libya said it would pay compensation.

1971 (cont'd)

December 9: OAPEC opened its membership to states with oil revenues as an important source of income rather than the principle source of income.

December 14: Saudi Arabia and Aramco described the oil strike at Masalij as equal to the Ghawar field. Ghawar was the world's largest.

1972

January 11: The Venezuelan tax reference price increase, announced on December 21, 1971, took effect. Increases ranged from 14 cents to 63 cents per barrel, averaged about 32 cents per barrel, and were apparently in lieu of a negotiated increase for the devaluation of the dollar, as called for by the OPEC. In an apparent attempt to stabilize failling crude production, the Government also announced tax penalties for reductions in production of more than 2% below the 1970 production, and penalties for production increases above 4% over 1970 production,

January 15: Iraq and IPC began considering a 17-point Iraqi proposal, which included Iraqi participation in the IPC concession, Iraqi representation on the IPC board of directors, and Iraqi participation in IPC capital.

January 20: In Geneva, oil companies and Persian Gulf countries agreed to raise the posted price of crude oil by 8.49%, about 16 cents per barrel, to compensate for the devaluation of the dollar, and to review the value of the dollar quarterly for readjustment of prices. Oman, not a member of OPEC or OAPEC, and the Petroleum Development (Oman)

1972 (cont'd)

January 20: Company agreed to a similar devaluation compensation in February.

February: Libya and the Mobil Oil Company began negotiations on compensation for the devaluation of the dollar. Esso representatives joined the talks in April.

March: In the first round of participation talks, Aramco, the operator in Saudi Arabia, offered 20% participation to Saudi Arabia, which was accepted. Kuwait and the Kuwait Oil Company, and Iraq and the Iraq Petroleum Company, also agreed to 20%, but Libya stated that 20% was not enough. Detailed negotiations on participation began in San Francisco in April, and moved to Geneva in May.

March 5: Egypt, Syria, and Iraq were admitted to membership in OAPEC. Applications for membership were received from Tunisia and Oman. OAPEC members initiated an agreement to form a multinational tanker fleet.

April: The Government of Kuwait limited the Kuwait Oil Company (Gulf and SP) to 2.9 million barrels per day production, thus becoming the first Persian Gulf producer to begin a conservation program.

April 1: Pertamina, the Indonesian Government company, raised the posted price of crude from $2.60 to $2.96 per barrel, a 13.8% increase. (In 1971, Pertamina raised the price twice, 17.6% on April 1, and 30% on October 1.) The landed priced of Indonesian crude in Japan rode to $3.27 per barrel after the 1972 increase, as compared to the landed

1972 (cont'd)

April 1: price of Iraqi crude of $3.07, but the difference was offset by the Indonesian sulfur content of 0.08% compared to Iraqi sulfur content of 2.3%.

April 22: The Government of Qatar formed its own oil company, the Qatar National Petroleum Company (QNPC).

May 3: The companies and the Government of Libya agreed to an 8.49 % increase in posted prices to compensate for the devaluation of the dollar. Esso did not sign because the company was holding separate negotiations on LNG production of liquefied natural gas (LNG).

May 17: The Iraqi Government told IPC to raise production, to formulate a long-term production program, and to agree to participation, or Iraq would take action. The Government offered three choices: IPC could form a partnership with the Government to raise production, with the Government taking the excess; IPC could increase production and give the excess to the Government; or IPC could surrender the Kirkuk fields to the Government. IPC claimed it could not sell any more production due to a glut caused by cheap tanker rates. IPC production dropped from 1.2 million b/d in February, to 931,000 b/d in March, to 720,000 b/d in April.

June 1: Iraq nationalized the IPC operation in Kirkuk; the Basrah and Mosul operations were not affected. On June 2, Britain asked the Central Treaty Organization to pressure Iraq to pay compensation for the nationalized property.

1972 (cont'd)

June 1: Negotiations between IPC and Iraq began on June 28, with Nadim Pachachi, then Secretary-General of OPEC, and Jean Duroc-Danner, Director of CFP, acting as mediators. Syria nationalized the IPC pipelines and refineries.

June 24: The Shah of Iran said that his country was not pressing for participation, but did want more oil for its own marketing and refining, as well as new price agreement to link prices to Western market purchasing power.

June 26: Trinidad and Tobago was accepted as the twelfth member of OPEC at the Vienna meeting, pending ratification by Iraq. Ecuador's application for membership was offered at the OPEC meeting in Lagos in November.

July 23: Iran and the consortium began negotiations on NIOC's share of crude, increased production, and maintenaing parity of price of crude to Iranian imports. The NIOC-consortium negotiations ended on July 26, but no agreement was announced.

August 4: Saudi King Faisal said that the proposal to use oil as a weapon against the United States should be ruled out because a boycott, while feasable, was very complex. The King warned that United States interests in the Middle East were "in for a rough time."

September: Libya and AGIP, the Italian state company, agreed to 50% participation, compensation at net book value of assets, and a buy-back price halfway between tax-paid cost and posted price. The AGIP-Lybian agreement was ratified in March 1973.

19 72 (cont'd)

October 5: The Persian Gulf States and the oil companies reached a preliminary agreement on participation. Each state will ratify the agreement and enter more detailed negotiations with the companies operating in the country.

December: Libya stopped loadings of crude from the Nelson Bunker Hunt portion of the Sarir field formerly shared with the since-nationalized BP. Hunt had rejected Libya's proposal for 50 % participation.

The Shah of Iran informed consortium representatives that he would not extend their operating agreement with NIOC beyond 1979. This followed the successful agreements reached by Saudi Arabia, Abu Dhabi, Qatar and Kuwait which increased their participation to 25%, rising to 51% by 1982.

1973:

January: The participation principle agreement, which came into effect on 1 January after ratification by Saudi Arabia and Abu Dhabi, was approved by Kuwait and Qatar. Initially, the participation purchased by the producing countries was set at 25%, eventually rising to a 51% controlling interest. The oil companies agreed on the provisions that the 25% level would be maintained until 1978. The oil companies were to be compensated on the basis of the "updated" book value rather than the original cost. The agreement contained

1973 (cont'd)

January: a complex set of interrelated provisions which are designed to: (1) enable each of the parties to have access to the quantities of crude needed to meet their current and forecast requirements, (2) Provide a market for sizable volumes of the government's oil during the transition period (phase-in oil), and (3) Give the operating company adequate notice to enable it to install additional capacity as may be required to meet the forecast needs of all parties.

The agreement also provided that each participating country have the right to take an active part in management and that each party would bear its share of all expenditures, including those required to maintain and expand capacity. All concession agreements were to remain in effect.

Iraq continued its negotiations with the nationalized IPC, and Iran, the last of the six Persian Gulf states in the participation talks, had decided in June 1972 to pursue its own negotiations with the consortium.

Libya and Oasis (Continental, Marathon, and Amerada/Shell) opened negotiations on 50% participation. Negotiations between Government and Nelson Bunker Hunt on 50% participation resumed. Hunt was allowed to resume crude shipments from Sarir.

January 7: The Arab Maritime Company for Oil Transportation was founded in Kuwait, at the OAPEC meeting. The OAPEC joint owners were Saudi Arabia, Bahrain, Qatar, Libya,

1973 (cont'd)

January 7: Algeria, Abu Dhabi, and Kuwait. Dubai withdrew from OAPEC when the organization decided to build its drydock in Bahrain.

January 22: First National City Bank reported that the seven largest international oil companies were increasingly dependent on the Eastern Hemisphere as a crude-supply base and that the U. S. could not escape heavier reliance in the future. The Bank reported that the net assets of the seven internationals more than doubled from 1961 to 1971.

January 23: The Shah of Iran said if the output of Iranian oil were not doubled by 1977, the contract with the consortium would not be renewed when it expired in 1979 and that the oil industry would be nationalized at that time. In February, Iran revived the contract purchase arrangement of 1954, whereby the consortium would surrender its management and investment rights to NIOC, and became a contractor to purchase oil from NIOC fields being operated by the consortium. The Shah reversed his position of June 24, 1972 when he said that he intended to sign three 5-year extensions to the consortium's operating agreement when it came up for renewal in 1979, extending it to 1994. The oil companies estimated that doubling of production to meet the Shah's revenue needs would cost over $1 billion. The Shah threatened to deny the renewals on the basis that the companies had not used the "proper technology" to increase output per well and the they were "ignoring" secondary recovery operations.

1973 (cont'd)

February 5: Proposals for cooperation to protect interests of major oil importing countries through development of a common energy strategy were discussed in statements filed with Senate Interior Committee . Most officials reported that the problems could be minimized by improved cooperation between producing and consuming states. It was felt that the consuming nations could band together to give producing nations incentives for maintaining production while establishing counterforces to limit exporters' leverage and avoid intense competition among consumers. The Interior Department advised that the best forum for western importers would be the OECD. Several national oil companies in Europe had already tried to form a counter cartel called the "Zurich Group", but it was unsuccessful because of its lack of strength relative to OPEC. There was considerable concern over the prospect of bidding contests among consumers to obtain oil supplies through bilateral deals. The Saudi offer to make long-term oil commitments to the U.S. in return for investment opportunities, was an example of such possible cooperation.

It was reported that Nigeria was seeking a one-third share of the Shell/BP operation in Nigeria. Nigeria had signed participation agreements for one-third interest in the AGIP/ Phillips field and for one-third interest in the ERAP/ELF fields. Shell/BP had offered a 25% participation.

1973 (cont'd)

February 19: Saudi Arabian Oil Minister Ahmad Zaki Yamani said that he was all for cooperation between producing and consuming countries, but that "if it is war they want, then war they shall have. They will be starting it." Referring to proposals for a consumer-country united front to offset the growing power of OPEC, he said that in a confrontation the consumers could only lose. He added that "many secret developments will be revealed within the coming months, and not years," but declined to elaborate further.

February 28: Iraq and the IPC signed an agreement (ratified by Iraq on March 1) for the settlement of the dispute which began with the 1961 concession reversion and which finally resulted in the nationalization of June 1, 1972. Under the settlement, IPC agreed to pay royalty arrears of $141 million due since 1964, and Iraq agreed to furnish one million tons of crude per month for 15 months at Mediterranean ports as compensation for the nationalization of the Kirkuk operation. IPC agreed to surrender the Mosul field without compensation (the field was uneconomic to operate) and Iraq agreed to allow IPC to retain the Basrah field.

March 19: */ The first open threat of an oil cutoff by one of the traditionally conservative, major-oil producing Arab states was made by the Kuwaiti ruler, Shaykh Sabah Al Salem Al

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*/ Denotes date of publication of the event in the Oil and Gas Journal. The actual event occurred several days earlier but a precise date was not available.

1973 (cont'd)

February 28: Al Sabah who declared flatly that Kuwait would shut off its oil flow -- then running at about 3 billion b/d -- to western consumers if there should be another outbreak of hostilities between the Arab countries and Israel. The more volatile Arab states--Syria, Libya, Iraq, and Egypt -- had threatened such action, but the conservative Arab regimes in Saudi Arabia, the Trucial Coast area, and Kuwait had not. "We are committed to this," the Kuwait ruler declared. "When the zero hour strikes, we shall use our oil as an effective weapon in the battle with Israel. This is our irrevocable position. The battle begins with oil and ends with human lives."

March 19: */ Following the second devaluation of the dollar, Venezuela raised the posted price by 8.83 %, or about 27.5 cents per barrel, average ING about 15 cents per barrel in taxes.

March 22: The Ministerial meeting of OPEC members agreed to seek negotiations for further adjustments of posted prices after the second devaluation of the dollar.

March 26: */ OPEC warned oil-consuming countries against forming any organizations of petroleum importing countries. An OPEC communique warned that concerted action on the part of industrialized oil-importing countries, was "not in the best interest of orderly international trade and could have negative effects on the present energy situation." Shaykh Yamani suggested that the developed industrial countries should build petrochemical plants, export refineries, and

1973 (cont'd)

other downstream facilities in the producing countries.

March 26: */ The Shah declared that the Iranian operating consortium's facilities had been "handed over" to the government March 21. The consortium was to provide technicians to NIOC but they would operate under Iranian management. In the 20-year agreement the member companies would be consumers rather than producers and would pay for their oil in advance. The Shah insisted that Iran would not be paid less for its oil than other Persian Gulf oil producers. Earlier, the Shah had said that the consortium members would be given "good prices and the kind of discounts which are always given to a good customer."

April 2: */ The Algerian state petroleum monopoly obtained U.S. Government financing for LNG facilities for shipment of 1 billion cfd to the U.S. East Coast. The U.S. Export-Import Bank approved a direct loan of $157 million at 6% interest and a guarantee of an additional loan in the same amount plus other loans for a total of $366.5 million.

April 2: */ The President's first international economic report to Congress predicted that Arab producing countries with large currency surpluses "will probably invest much of this money in refining and distribution facilities or take other direct or portfolio investment positions in consuming countries.

1973(cont'd)

April 2: */ British Professor Neville Brown warned that an Arab embargo of oil to the West could result from an Arab-Israeli conflict. Walter J. Levy added that there was "an extremely urgent need for a common energy policy among the three leading oil consuming areas. If they pursue their separate courses in world oil markets, they will become targets for potential political and economic blackmail, such as some have already experienced." Levy recommended establishment of an "International Energy Council" with a permanent staff to coordinate these policies.

April 9: */ The economic adviser to the Saudi Arabia Ambassador to the U.S. stated that the formation of an oil-consuming organization by the OECD could be a fortunate and welcome development if it were used as a basis of cooperation between oil-buying and oil-exporting nations. He warned, however, that if the organization developed into a "cartel" for purposes of confrontation, it would cause an "unhealthy and abrasive" situation.

April 30: */ After failing to get its way with the international oil companies on crude-price increases, OPEC issued an ultimatum that the companies submit a written counter-proposal to provide for an increase that would offset the loss of purchasing power resulting from the second dollar devaluation. The companies had offered a 7.2% increase, while OPEC was insisting on 11.1%.

1973 (cont'd)

April 30: The Government of Libya changed its participation proposal from 50% to 100%, with the Government to pay compensation at net book value and to purchase crude oil from the operating companies at market prices. The Libyan proposal was presented to the Oasis group (Continental, Marathon, Amerada/Shell), Amoseas (Texaco, California Standard), and to the independent Occidental.

May 15: Libya, Kuwait, Iraq, and Algeria forced a complete shutdown of oil shipments for periods of 1 hour in the latter three and 24 hours in Libya. The shutdown was termed a protest against the 25 th anniversary of the funding of Israel but was also intended to show the world what could happen.

May 17: The May 17 deadline for submission of new participation proposals in Libya passed with no apparent action.

May 21: The OPEC ministerial conference was postponed because of differences between conservative members (Saudi Arabia, Abu Dhabi, and Iran) and the more radical states (Libya, Iraq, and Kuwait). Libya was reported to want a confrontation with the oil companies while the three Persian Gulf states sought to avoid one for fear of upsetting recently negotiated participation agreements. Libya called on all OPEC states to abandon the participation concept and to take over 100% control of the oil resources as Iran had already.

1973 (cont'd)

May 23: King Faisal warned that U.S. support for Israel was making it impossible for Saudi Arabia to preserve American commercial interests. If some solution weren't found, the king said, the Saudis would find themselves isolated in the Arab world, and he would remove American interests to prevent this.

May 24: Iran and the consortium signed a preliminary agreement which provided for Iranian management control of the oil industry and for a 20 year guaranteed crude oil purchase for the companies. The oil companies were to purchase 80% of Iranian crude oil at a price no less than that paid to other Persian Gulf states, and the National Iranian Oil Company was to sell the other 20% of the crude production on the open market.

May 26: Confrontation over oil-prices was averted when the Saudi Arabian and Nigerian oil ministers were added to the negotiating team represented by the oil ministers of Libya, Iraq, and Kuwait. The companies had agreed to a 6.6% in the Geneva Pact and had later raised that to 9%, but OPEC held out for minimum of 11.1%.

June 1: In Geneva, OPEC and Western oil companies agreed to raise posted prices by 11.9% to compensate for the second devaluation of the dollar.

June 1: Aramco prepared a memo for communication to Washington, listed the major points made by King Faisal. "Action must be taken urgently," the memo stated, "otherwise, everything will be lost." The executives who conveyed that message

1973 (cont'd)

June 1: who conveyed that message to Washinton, however, didn't find the same concern among U.S. officialdom. "The impression was given that some believe H.M. (King Faisal) is calling wolf when no wolf exists except in his imagination," the memo said.

June 4: */ Saudi Arabia sold all of its participation crude for 1973, 1974, and 1975, at 93% of its posted prices ($2.48-$2.74) to a group of American, Japanese, and European independents plus Brazil's Petrobras and Taiwan's Chinese Petroleum Group.

June 11: Libya nationalized the Nelson Bunker Hunt oil company. Hunt had rejected the Libyan proposal of October 1972 for 50% participation and a retroactive payment of 50% of Hunt's profits back to December 1971, when Hunt's partner, British Petroleum, was nationalized. Hunt and the Libyan Government had gone to arbitration in early May but apparently were unable to settle the dispute.

June 27: The Organization of Petroleum Exporting Countries (OPEC) at its 34th regular meeting in Vienna set up a ministerial committee headed by Venezuelan Oil Minister Hugo Perez La Salvia to "continuously review the world energy situation and the statement of policy adopted by the conference and to follow up on the studies to be undertaken in this respect.

July 1: Libya warned Oasis, Occidental, and Amoseas that they should accept the Government's offer of net value compensation for 100% participation. The warning was considered

1973(con't)
July 1: to be a threat that the companies would be nationalized, following the Hunt example of June 11.

July 4: King Faisal of Saudi Arabi said that his country would find it difficult to continue on friendly terms with the United States because of American support for Israel. The statement was interpreted as a warning that Saudi oil would not be sold to the United States unless the United States adopted a more "even-handed" policy.

July 16: */ Kuwait demanded immediate 51% participation in Kuwait Oil Co. instead of 25% rising to 51% in 1982. Agreement on the latter terms had been agreed to in January but it had not been ratified by the national assembly and was considered "null and void.

August 6: */ The Shah of Iran signed into law the legislation authorizing the take-over of the Iranian oil industry. This action followed unanimous approved by both houses of the Iranian parliament. Iranian negotiators said that Iran would seek downstream ventures and would emphasize the building of refineries in Iran with the purpose of eventually exporting more product than crude oil.

August 13: */ U.S. decided that Libya's expropriation of the Nelson Bunker Hunt Oil Co. holdings was invalid under international law, had "no public purpose," and was a case of political reprisal. The U.S. said it would notify foreign

1973(cont'd)

August 13: governments and would try to persuade them to forbid imports from the fields in question. Libya had been negotiating for a 50% interest in the fields.

August 13: */ Gulf Oil and Texaco signed a 20-year agreement with Ecuador to continue exploitation and development in its operating area. The Ecuadorian oil industry reserved the right to acquire up to 25% of the joint venture in 1977.

August 20: */ Libya expropriated 51% of the assets of Occidental Petroleum Corp., which "acquiesced" to the transfer of assets to the Libyan National Oil Co. (LNOC) for an immediate cash payment of $135 million. Production of a second large producer, Amoseas was cut by Libya to 50% to increase the pressure to submit to nationalization. Amoseas and Oasis Oil Co (Conoco, Marathon, and Amerada Hess) were given until Sept. 1 to accede to 100% Libyan control.

August 27: */ Libya pressured Oasis Oil Co. to accept a 51% takeover, but Shell refused to capitulate fearing that acceptance would trigger favored nation clauses. The Libyan government said that the takeover "is certain to have an impact on other oil-exporting countries" and that it would result in imposition of new conditions on oil companies operating in other producing countries. Libyan officials also said the new policy required the discovery of one new barrel of oil for each one exported. The new agreement allows the companies

1973 (cont'd)

August 27: to buy back the 51% of production claimed by Libya and provides for compensation for expropriated assets based on book value. Libyan Premier Jallud said that Libya would demand $6 per barrel instead of the $4.90 agreed to for buy-back oil and would not accept payment in dollars. He added that "if industrial nations and oil consumers gang up against us in a so-called cartel, we shall see that they bear the consequences of their wrongdoing."

August 27: */ OPEC warned that when the 1971 Teheran agreement expired at the end of 1974, it would to demand price increases that could move Persian Gulf Crude prices to $5 to $6 per barrel. OPEC Secretary General Nadim Pachachi said these prices could top $10 by 1980.

September 1: Libya nationalized 51 % of the interests of Esso Libya/Sirte, Mobil, Shell, Gelsenberg, Texaco, Standard Oil of California, Libyan-American (Atlantic Richfield), and Grace.

September 15-16: 35th OPEC conference designated Abu Dhabi, Iran, Iraq, Kuwait, Qatar, and Saudi Arabia (the "Gulf Six") to negotiate collectively with the companies over prices. Other OPEC members were to negotiate individually.

September 17: */ Secretary of State Kissinger said that there was no near-term alternative to increasing imports of oil from the Middle East. The Arabs had made clear that their willingness to sell increasing volumes of oil to the U.S. would be closely linked with a change in the U.S. political position

1973 (cont'd)

September 17:* in the Middle East. Kissinger said that "we have excellent relationships with our principal Middle Eastern suppliers of oil, Saudi Arabia and Iran, and we do not foresee any circumstances in which they would cut off our supply."

September 24: */ Hisham Nazer, president of Saudi Arabia's Central Planning organization, said that his country's oil income since 1970 was so far ahead of its needs for economic and social development that further increases in production would depend largely on Saudi Arabia's ability to establish more domestic industry and to train more skilled manpower to operate it. He said that "In Saudi Arabia, we believe that we are in a period of history where the possibility exists to turn the course of time, and we are eager to accept that challenge ... Saudi Arabia is answering the call to sustain modern civilization-- this is an obligation to to its people and to the world."

September 27: * / OPEC resolved to take "appropriate measures" against oil companies resisting take-over and endorsed Abu Dhabi's claims to higher prices for its high-gravity low-sulphur crudes.

October 1: */ Kuwait announced that it was seeking immediate 51% participation in the operations of Kuwait Oil Co (50% Gulf, 50% British Petroleum).

October 1: */ OPEC sent formal notices to all principal oil companies to meet in Vienna on Oct. 8 to open new price negotiations on crude oil.

1973 (cont'd)

Ocotber 3: */ James Akins, Ambassador to Saudi Arabia, reported that it was serious about its intentions to refuse to expand oil exports unless the U.S. adopted a more even-handed Middle East policy. The Saudis were reported to be unwilling to expand production merely to meet U.S. needs, unless Washington revised its traditional policy of strong support for Israel. Akins predicted that soaring demand and tight supply would boost world crude prices to $10 by 1980.

October 3: */ William Simon, Chairman of the Oil Policy Committee and Deputy Secretary of the Treasury, said:

> ...The need for improvement in the political atmosphere in the Middle East, and this subject has the highest priority for us.... The U.S. is giving serious attention at the highest levels of our Government to helping Saudi Arabia meet its objectives of economic diversification and sound growth.
> ... We expect that any differences between us and Saudi Arabia will be resolved through negotiation and in the spirit of long-standing close relations between our countries.

October 6: The fourth Arab-Israeli war began.

October 7: Iraq nationalized the holdings of Exxon and Mobil in the Basrah Petroleum Company, corresponding to 23.5 % equity in the company.

October 8-10: OPEC ministerial committee of the Gulf Six met with companies' representatives to discuss revision of the 1971 Teheran agreement and oil prices but negotiations failed.

October 12: A joint memo was sent to President Nixon by the chief executives of the Aramco owner companies. He

1973 (cont'd)

Ocotber 12: was warned that the Saudis threatened to cut back crude-oil production due to U.S. support to Israel. "A further and much more substantial move will be taken by Saudi Arabia and Kuwait in the event of further evidence of increased U.S. support of the Israeli position," the executives told President Nixon. The company executives warned that a single action by one producer government against the U.S. "would have a snowballing effect that would produce a major petroleum supply crisis." They warned that the situation not only jeopardized their commercial interests, but also the entire position of the U.S. in the Middle East with "Japanese, European, and perhaps Russian interests largely supplanting United States presence in the area, to the detriment of both our economy and our security."

A later company memo stated that "the general atmosphere encountered [in Administration] was attentiveness to the message and acknowledgement by all that a problem did exist -- but a large degree of disbelief that any drastic action was imminent or that any measures other than those already under way were needed to prevent such from happening."

October 16: The Teheran agreement was scrapped as six Persian Gulf members of OPEC imposed a $1.989 increase to $5/bbl (market price of $3.65 /bbl)for key Arabian light crude. Saudi Arabia, Qatar, Kuwait, Iraq, Abu Dhabi, and Iran also declared themselves to be the sole arbiters

1973 (cont'd)

October 16: of price and that all other OPEC countries would endorse the measures. OPEC claimed that the increase was only 17% higher than prices in recent direct sales by governments in direct sales to buyers, although BP said that was misleading and that the true increase would be about 70%. Income taxes and royalty payments to producer governments were expected to rise about $1.25 /bbl.

October 17: Arab oil ministers agreed on the use of the oil weapon in the Arab-Israeli conflict including , a mandatory cut in exports and a recommended embargo against unfriendly states. Oil production was to be cut at least 5% by eleven Arab countries each month unless Israel were to withdraw from the territories occupied in the 1967 war. The participating countries were Saudi Arabia, Abu Dhabi, Algeria, Bahrain, Dubai, Egypt, Kuwait, Iraq, Libya, Qatar, and Syria. Individual states were free to cut the oil flow by more than 5% if they wished. The official statement from Kuwait said:

> Unless the world community corrects the situation by forcing Israel to withdraw from our occupied territories and by making the U.S. realize the high price European industrialized counties will pay as a result of the unlimited American support for Israel.
>
> ... The conferees are aware that this reduction should not harm any friendly state who assisted or will assist the Arabs actively and materially. Such countries would receive their share (or Arab oil) as they did before the reduction. This exceptional treatment will be extended also to any other countries which might take active steps against Israel in a way to force Israel to end its occupation.

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1973 (cont'd)

October 19-20: Saudi Arabia and other Arab states proclaimed the embargo on oil exports to the United States.

October 23-28: Oil embargo was extended by Arab States to the Netherlands, Portugal, Denmark, Rhodesia, and South Africa.

November 4: Arab producers met to set production cutbacks at 25% and to agree on a unified embargo agaisnt the U.S. and the Netherlands. Prior to the meeting each Arab State had been acting on its own.

November 5: */ The U.S. military reported t hat the embargo was having a more serious effect on it than on the civilian market.

November 7: President Nixon announced in a television address mandatory allocation of crude oil and refined products and a reduction in distillate fuel-oil allotments to 85% of 1972. He ordered the Federal Government to take steps which would conserve up to 2.3 million b/d. The goal of energy self-sufficiency was stated as the goal of a new program which he proclaimed "Project Independence." Industries and utilities were prevented from converting to oil from coal and were encouraged to convert from coal to oil. Airlines were asked to reduce speeds and reschedule flights to save 10% of their fuel consumption. He recommended a 50 MPH speed limit and said that standby rationing plans for gasoline and fuel oil were being made. He asked Congress for authority to suspend natural gas prices at the

1973 (cont'd)

November 7: wellhead during the emergency, to waive clean-air standards, to waive environmental impact standards, to produce oil from the Elk Hills Naval Petroleum Reserve, and to adopt ear-round daylight savings time.

November 12: */ Nigeria became the last major producer to raise posted export prices. The increase was from $4.29 /bbl to $8.31 /bbl, a jump of 93,7 %.

November 12: */ The major U.S. oil companies said that rationing was necessary to offset crude losses. The Department of Interior created an Office of Petroleum Allocation to handle mandatory allocations.

November 18: Arab oil ministers cancelled the scheduled 5 percent cut in production for EEC.

November 19: The National Petroleum Council warned that shortages of major products could average 25% nationwide. It recommended immediate rationing of all petroleum fuels on a national scale.

November 19: */ Shaykh Yamani said that Saudi Arabia wanted help in building an export-oriented industrial economy before its oil reserves are eventually exhausted. He emphasized that it was politics, not "petty economics," that would determine the extent to which the U.S. would have future access to Saudi Oil, referring to Arab demands of withdrawal of occupied lands by Israel and restoration of rights to displaced Palestinians. He indicated that a strongly symbolic statement altering the seemingly absolute support of Israeli, together

1973 (cont'd)

November 19: with visibly subtantive change, would be required from the U.S. "We did not want the embargo. We hope that we can do something, but there must be something that we can show as change. The ceasefire isn't enough, " he said. In addition, he noted it would take another meeting of Arab oil ministers before the embargo could be modified or lifted. He said King Faisal would go along with whatever the combatants in the war agreed to.

The Saudis also had due regard for public opinion, both in their own country and among their Arab neighbors, the minister said. For example, he cited Iraqi anger over Saudi Arabia's failure to nationalize Aramco when the U.S. resupplied Israel after the start of the war Oct. 6. Yamani declared prices for oil in 1974 would "jump beyond your imagination," although he said the Saudis want commercial stability. Yamani said that Arabs acted as they did because only a cutoff of oil to the U.S. would change the attitude of the American public.

November 19:*/ Saudi Arabia demanded immediate 51% control of Aramco instead of in 1982 as called for in the 1972 participation agreement.

November 19:*/ OPEC Secretary General Khine said that the Persian Gulf States had "put a final end to the abnormal practice of negotiating oil prices with the international oil companies." He added that the producing countries will continue to need the "presence" of the oil companies, in many ways, especially in exploring new reserves.

1973(cont'd)

November 19: */ Libya raised its buy-back price for crude oil from $4.9- to $7.60 /bbl.

November 25: Iraqi Oil Minister Murtada Abdel Baki said in an interview that the embargoes were useless. "Our petroleum policy should be aimed more at winning friends rather than creating foes and rivals," he said. Oil cutbacks that damage Japan, Europe, Latin America, and Asia serve the interests of the U.S. he declared. The U.S. competes industrially with those areas, he said, and it is wrong to damage European and Japanese economies. Prices, Baki declared, should be set at levels that "will not lose our old and new friends -- not to let our enemies and the monopolistic oil companies make political gains out of the recently increased prices."

November 25: The Shah of Iran offered to try to make up western oil losses, but could not because was producing at capacity levels. The Shah said that any increases would depend upon the discovery of "new wells."

December 3: */ Venezuelan President Caldera rejected suggestions that Venezuela cut back oil production but said it would not increase it either. An oil ministry official had previously said Venezuela could cut oil output to 2 million b/d from 3.3 million b/d and still meet national budget needs with a 30% surplus. Caldera contended, however, that this step was "not justifiable at this time when our traditional clients need the product."

1973(cont'd)

December 3:*/ Kuwait appealed for understanding by the American people via full-page advertisements in the Washington Post and New York Times. It published an open letter explaining Arab actions, reflecting a growing fear among Arab leaders that they were becoming villains to the American public.

December 3:*/ The Shah of Iran urged that the oil embargo be ended. "You have played your hand well," he said, "but you should now play your cards equally well in times of peace. Since you have accepted the cease-fire for the sake of a peaceful settlement, why do you continue to cut off the oil and reduce production? Petroleum is like bread. It must not be cut off during peacetime. Why do you want to appear as if you want to starve the world? Why punish those in Europe who stood by your side?"

December 3: */ What has Japan done that it should be made to reduce its national product by 20%?"

December 9: The Arab oil ministers announced further production cut of 5 percent for January but friendly countries were exempted. The cuts were to continue "to the extent that the reduction in income accruing to any of the producing countries should not exceed one-quarter of the 1972 income level." The summit also established a committee to establish friends and foes. It included the foreign and oil ministers of the producing states, and its job was to classify the consuming countries into three groups: friendly, neutral and hostile. Saudi Arabia, largest of the producers, had already

1973 (cont'd)

December 9: publicized its friends as : Britain, Spain, France, India, and Brazil, all Arab states, Islamic oil-importing states (Pakistan, Turkey, and Malaysia), and African countries that have severed diplomatic relations with Israel. Embargoed foes were the U.S., Portugal, the Netherland, South Africa, Rhodesia, and all centers that tranship oil to the U.S. -- such as the Carribbean island countries.

December 22-25: OPEC ministerial committee of the Gulf Six decided to raise posted price of market crude to $11.651 per barrel effective January 1, 1974. This was an increase of 128 %. The Arab oil states, except Iraq, also announced that they would increase January production by 10% and and would cancel a planned 5% cutback. The government take from the new prices was to be about $7/bbl, an increase of 275% since October. The Shah of Iran was believed to be the architect of the increase.

December 24:*/ Kuwait Oil Minister Abdel Rahman al Atiqi declared his country would continue to cut oil production and might eventually cut its production to half its former level, or to only 1.5 million b/d. By government decree, production had been limited to 3 million b/d and after the earlier cuts stood at a little less than 2.5 million b/d.

December 24:*/ Iraqi Oil Minister Sadun Hammadi, declared again his opposition to the oil cutbacks and said Iraq would boost its production from a current 2.1 million b/d to 3.5 b/d in 1975. The cutbacks, Hammadi said, harm both friends

1973 (cont'd)

December 24: (cont'd) and foes. He repeated his call for total nationalization of U.S. interest in the Middle East, withdrawal of Arab funds from American banks, and severance of Arab diplomatic relations with U.S. Hammadi deplored the spiral in crude prices. "As producers of oil, we must think of the future and must set the ceiling to which we can allow prices to rise," he said. "The industrialized nations which are in need of oil possess gigantic scientific potentials and have alternative sources of energy for the future. We can't expect to place the economies of the industrialized nations in danger without expecting a backlash."

December 27: Mandatory oil allocation regulations were issued by William Simon, FEA Administrator.

December 28: Crude imports into Districts 1-4 fell to 1,752,000 b/d for the week ending Dec. 28, little more than half of the 3,454,000 b/d for the week ended Nov. 2, 1973. These levels indicated that the embargo was nearing projected levels of maximum effectiveness.

1974

January 14:*/ President Nixon invited representatives of six major oil-consuming countries to Washington to discuss means of ending the embargo and dealing with the higher oil prices imposed by OPEC. The meeting was partially the result of unilateral arrangements between France with Saudi Arabia and others that Secretary of State Kissinger was trying

1974 (cont'd)

January 14:*/ to prevent. The Administration avoided actions that would upset relations with the Arabs and were pressing Israel to reach a peace settlement. The U.S. continued to export food and machinery to the embargo participants, including shipment of 70 advanced FSE Freedom Fighter jets to Saudi Arabia. The reason given for this extraordinary action was that it would provide the Arabs with more reason to return to normal trade.

January 17: Shaykh Yamani admitted that the oil embargo had not been effective against the U.S. and the Netherlands, largegely because of rearrangement of oil supply systems by the major oil companies. Yamani said "We don't intend to take other measures to stop oil outside the Arab world from going to these countries."

January 21:*/ The Shah of Iran called for OPEC consultation with the OECD and the EEC.

January 21.*/ France concluded a 3-year oil-supply deal with Saudi Arabia and was negotiating on a 5.8 billion bbl/ arrangement that would cover 20 years. French Prime Minister Messmer said that France would continue to seek unilateral supply arrangements. France was skeptical of the U.S. proposal of a consumer alliance and called for a massive international conference to seek solutions to the energy crisis. The French proposed that the meeting be held within the framework of the United Nations to avoid a confrontation between producers and consumers, which it feared would result from

1974: (cont'd)

January 21: the U.S. approach. Britain, West Germany, and Japan were also seeking supply deals with the Middle Eastern states.

January 21:*/ Venezuela rejected OPEC plans for a price increase on April 1 and decided to raise its prices as of February 1 to $14.08/bbl.

January 22-23:*/ OPEC promised the developing countries of Africa that they could have all the oil they wanted provided that they did not reship the oil to embargoed countries. OPEC refused to reduce the price, fearing that it could be resold at a profit.

January 28:*/ An official of Aramo said that production could be quickly restored to October 1973 levels after OPEC ended the embargo. That would require an increase in production of nearly 1.5 million b/d and could reach western markets within 5-6 weeks of the lifting of the embargo. He added that the flow could reach 9.3 million b/d by the end of the year.

January 28:*/ Indonesia proposed the imposition of profit restrictions on oil producing companies. The Government would take 90% of income over company realization per barrel of $5 on each barrel selling at $10.80/bbl/ Existing contracts, which the Government was trying to break, allowed the production to recover exploration and development costs; the remaining 60% was split 65% for Pertamina and 35% for the producer.

January 28:*/ Two large projects to import Algerian liquefied natural gas to the U.S. were canceled because of U.S. Federal Power Commission inaction before December 31, 1973.

1974 (cont'd)

January 28:*/ Most oil-consuming nations were reported to be actively negotiating unilateral oil deals.

February 4: */ A new round of participation negotiations was triggered by Kuwaiti demands that Kuwait Oil Co. permit 60% government control effective January 1, 1974 with 100% transfer possible by the end of 1979. Compensation was set at $112 million, the net book value less depreciation. Kuwait also announced that it would not agree to long-term supply contracts with consumer governments but would auction oil instead. It also indicated that it did not expect to receive the "panic" prices that Libya, Nigeria, and Iran received at the height of the oil war which had since subsided.

February 11. */ Norway proposed that all nations-exporters, importers, and developing countries -- form an international agency to distribute oil and eventually to produce it. Norway maintained that the agency would be preferable to current oil company control of most world oil distribution.

February 11. */ Clovis Maksud, special envoy of the League of Arab States, referred to the Washington Culroy Conference by saying that "to confine the meeting to a select group of industrialized nations is tantamont to an affirmation of a continual economic hierarchy in a world seeking to even disastrous economic discrepancies .... In economics, as

1974 (cont'd)

February 11: */ in politics, a dialogue is preferred to economic confrontation." He said that if the energy crisis is one with worldwide impact, then energy producers and energy consumers sh uld meet within an international framework such as the United Nations, to remove chances of "suspicion" and/or "confrontation." He defended, however, the rights of oil producers to form their own block on the grounds that "the economically weak are encouraged to forge closer coordination."

February 11: */ President Nixon proposed legislation to halt the use of surplus credits earned in producing nations to eliminate U.S. tax liability elsewhere and to end to depletion allowances for foreign production and deductions for intangible drilling expenses in foreign countries. A sliding-scale tax was recommended to prevent windfall profits.

Febuary 11: */ Hunt and Exxon officials testified that private companies lacked the power to halt the spiral of oil prices in host countries. They said that a U.S. Government/industry team was necessary to deal with the producing countries and that a conference of consuming nations was a positive step and could be the last chance their governments had to restore stability to the international market. They said that the weakness in past negotiations resulted from a failure of Government and industry to cooperate. They blamed the plight of the consuming nations on successive demonstrations of weakness by their government

1974 (cont'd)

industries. They said that "Such weakness produced higher demands at an ever-faster pace until we have reached a point that industrial economics are imperiled, the world's monetary system is threatened, governments have fallen, and alliances are severely strained... The businessman failed to take into consideration the political significance of his economic acts, and the diplomat failed to recognize the economic and financial consequences of the producing states's political demands."

February 11: Libya announced total nationalization of units of Texaco, Standard of California, and Atlantic Richfield, while delegates from the world's major oil-consuming nations were meeting in Washington, D.C. Texaco said that its position was "that any unilateral Libyan Government action designed to deprive it of its interests is contrary to international and Libyan law and to the terms of Texaco's concession deeds." Texaco said that it was taking the necessary steps to protect its rights and that it had initiated procedures for arbitration. It also diverted tankers headed for Lybia.

February 12-14: Heads of state of Algeria, Egypt, Syria, and Saudi Arabia discussed oil strategy in view of the progress in Arab-Israeli disengagement but agreed to continue the embargo.

February 18:*/ The U.S. partners in Aramco denied that they would sell their remaining 75% interest to the Saudi Arabian Government of $1.5 billion in return for a Saudi pledge to give

1974(cont'd)

February 18:*/ the U.S. companies preferential treatment in purchasing crude supplies.

February 18:*/ The oil ministers of Abu Dhabi and Qatar began talks with their oil companies on renegotiation of their participation agreement to a 60-40 ownership comparable to that of Kuwait.

February 18: */ At the Washington Conference, the major oil-consuming nations, led by the U.S., agreed on the need to discuss with oil exporters "the problem of stabilizing energy supplies with regard to quantify and prices." Only France objected to the key points which included agreement "to develop a cooperative multilateral relationship with producing countries, and other consuming countries that takes into account the long-term interests of all." The 13 industrialized countries represented stopped short of a confrontation with the producing nations but reached a unanimity that was greater than expected on the subject of avoiding bilateral bidding contests that would drive up the price of oil. The communique issued at the close of the conference did not call for a rollback, but it did mention the severe economic problems that had been created by soaring oil prices in the preceding six months. Kissinger, however, stressed the need for a "fair price" for oil which would be "lower than existing prices but considerably higher than September prices." The conference concluded that the large rise in oil prices was a serious concern, that the price

1974 (cont'd)

February 18:*/ situation could lead to serious deterioration in income and employment, could intensify inflationary pressures, and could endanger the welfare of nations, and that international cooperation, including the oil producing countries, could improve the supply demand situation and could ease the adverse consequences so that "a more equitable and stable international energy relationship" would be established.

February 25:*/ Venezuela's President-elect Carlos Andres Perez said that all foreign-owned oil companies would revert to the state within two years after his inauguration. He said that the companies would be compensated for their properties. Under exisisting law the concessions were scheduled to revert beginning in 1983.

March 4: The EEC moved to begin a "new and wide-ranging dialogue" with the Arab states, generating U.S. concern that it might encourage the Arabs to prolong the embargo until the EEC approach could be analyzed. The three-phase approach was to begin with EEC President Herr Walter Scheel inviting 20 Arab states to send representatives to Bonn for preliminary talks. Then, several joint work parties would be organized to study possible areas for long-term economic cooperation and possibly political problems. Lastly, there would be a full-scale, 29-country conference of foreign ministers.

1974 (cont'd)

March 11: */ BP Chairman Sir Eric Drake warned Europen consuming nations that bilateral oil deals could be "fixed" once a rational oil supply system came into operation and that such deals acted against the world interest.

March 11: */ Treasury Secretary George Schultz asked the Senate Finance Committee for the authority to withhold trade concessions from countries which impose "illegal or unreasonable restraints on sales of commodities in short supply" and for the power to negotiate for "adequate commitments on the availability of key raw materials."

March 13: The Arab ministers agreed to end the embargo against the United States and to restore production to pre-October levels. A formal announcement was postponed because Libya objected to the lifting of the embargo.

March 17: Arab oil ministers announced the end of the embargo against the United States. The embargo was continued for the Netherlands and Denmark.

March 18:*/ Iranian Finance Minister Jamshid Amouzegar declared that his government would not let oil prices drop, even if it meant the breakup of OPEC. He also said that Iran would use "at least $700 million of its revenues to soften the financial problems of industrial countries whose balance of payments had been disrupted by oil-price increases. He added that the Shah suggested that the other OPEC states follow Iran's example and make deposits in proportion to their surplus revenues.

1974 (cont'd)

March 25: */ Mobil, operating under protest against Libya's 51% nationalization decree, notified the Libyan Government that it was willing to continue operations under the provisions of the law and "to enter a participation agreement with the government and national oil corporation.

March 25: */ Crude oil prices were frozen until July 1 at a meeting of OPEC oil ministers in Vienna. The move was a compromise between those states favoring new price increases, led by Iran, and those wanting price cuts, led by Saudi Arabia. Shaykh Yamani agreed to the freeze only on condition that OPEC review the situation in three months. OPEC's economic commission had recommended an increased in postings of 10%. OPEC qualified the freeze, however, by warning that new price increases could come if the consuming countries did nothing to restrain their inflation rates. OPEC also criticized the high profits of the oil companies and planned radical revisions of its members' tax structures.

April 1: */ Saudi Arabia notified Aramco that it could increase its production by 1 million b/d. Shaykh Yamani said that production would be restored to the September 1973 level or to the average of the first nine months of 1973," whichever is higher." Shipments to the U.S went to be frozen at 1,052,000 b/d "until we remove the Israeli-Arab conflict from our way." The amount was 300,000 b/d more than

1974(cont'd)

April 1:*/ at the beginning of the embargo to make up for U.S. crude losses of crude due to continued embargo by some other Arab countries, principally Libya.

April 8:*/ Major oil companies with interests in Aramco and the Iranian consortium were charged with benefiting from high posted prices and not resisting them. Financial data released by the Senate Subcommittee on Multinational Corporations showed that Aramco's 1973 profits were nearly twice as high as those for 1972. The charges were denied by the companies.

April 15: */ U.S. Commerce Department reported that the embargo did not reach full force until January and that it took two months for the oil lifted prior to the embargo to work its way through the distribution system. Only a small amount of Arab oil (809,399 bbl from Saudi Arabia and 588,445 bbl from Tunisia) entered the U.S. in January and February. The Department said that a portion of the Arab imports reflected leakage through the embargo, although most of the volume was crude lifted before shipments to the U.S. were proscribed. In addition to the crude received directly from Arab countries, other volumes reached the U.S. via transshipment from other nations: 647,173 bbl from the Netherlands in November and December, 224,334 bbl from France in November, 50,574 bbl from Belgium in that month, and 132,543 bbl from Italy.

April 15: */ Saudi Arabia and the U.S. agreed to strengthen cooperation in economic, military, and industrial areas. The Saudis

1974 (cont'd)

April 15:*/ planned to buy the latest U.S. tanks and 200 fighter planes. The U.S. denied that the deal was a reversal of U.S. policy and stated that Europe, Japan, and Israel had been consulted in advance. The Saudis gave Aramco permission to spend $2.25 billion to increase productive capacity by 2 million b/d by the end of 1975, which would have permitted production of up to 11.2 million b/d.

April 22: */ The United Nations, at the request of Algeria on behalf of the "group of 77" developing nations, held a special session on world raw materials and development problems. U.S. Secretary of State Kissinger warned against cartels and the inflationary spiral that could be set off by high oil prices and pledged a major effort to aid developing countries. Arab diplomats defended their crude-oil prices and contended that they were already committed to sizable financial contributions for assistance to developing countries.

April 22: */ Exxon and Mobil signed over 51% of their Libyan operations to the Government of Libya. Both entered production-sharing agreements that would provide for additional exploration acreage as well as compensation for the assets relinquished.

April 29: */ The major oil companies agreed to pay 93% of the posted price for 60% of Qatar's participation oil.

April 29: */ Libya reduced its contract prices for government owned crude by $1.50-$1.75/bbl.

1974 (cont'd)

May 6: */ FEO reported that the profit margin for U.S. producers in the Middle East jumped from $0.79/bbl to $3.73/bbl during 1973. FEO said it was probing transfer prices to determine if the entire amount should be permitted to be passed through to U.S. consumers.

May 13: */ Nigeria reached agreement with Shell-British Petroleum for 55% participation in their large Nigerian operation.

May 13:*/ Shaykh Yamani rejected the "Wilson Lever Plan"for consuming countries to set up a purchasing agency to buy crude collectively for the large importers. Yamani said that "any action of this kind would lead to a sharp increase in oil prices based on reduced production.

May 20: */ Kuwait approved a 60% participation pact with Kuwait Oil Co in a surprise move.

May 26: Kuwait offerred for bid its entire crude entitlement from Kuwait Oil Co. for the second half of 1974 and all of 1975. Kuwait said that if KOC were not willing to pay its price, the Government would gladly supply KOC's traditional customers at its asking price of about $11.05 /bbl.

May 27: */ Nigeria reached agreement with five more producing companies for 55% government participation.

May 27: */ Venezuela announced the appointment of a presidential commission to formulate a plan for a take-over of oil concessions and assets held primarily by foreign-owned companies.

1974 (cont'd)

June 1-2: The OAPEC oil ministers, except Iraq, decided to continue deliveries to the U.S. and to continue the embargo on oil exports to the Netherlands and Denmark. Algeria said that it did not approve of the action and would resume oil shipment to the two countries immediately. Saudi Arabia wanted to continue the embargo. Syria expressed satisfaction with U.S. peace efforts and recommended that the embargo on the U.S. not to be reimposed.

June 10: */ Texaco and Gulf agreed to demands by Ecuador for 25% of their oil production and transport facilities in Ecuador.

June 10:*/ FEA Administrator John Sawhill testified before a Senate Committee that there are some types of international oil agreements that should require prior government approval. Sawhill said two interagency studies were under way --one "which will for the first time indicate the full true cost of imported oil, including the risk of interruption and national-security implications," the other to determine the kinds of company/foreign-government deals over which the U.S. should have veto power. He agreed that the firms should not have sole authority to negotiate supplies and prices and that there should be be a Federal veto power in certain situations.

June 17: */ The U.S. and Saudi Arabia signed an agreement establishing a special relationship between the two countries. There was no promise from Saudi Arabia to supply guaranted volumes of oil to this country or for the price reductions

1974(Cont'd)

June 17: */ (cont'd) that were sought. The accord established a joint commission on economic cooperation and another on military matters, aimed at industrial development and modernizing Saudi Arabian armed forced. The economic commission had the Treasury Department as the lead agency, with participation also from State, Commerce, the National Foundation, and other related U.S. agencies, plus their counterparts in the Saudi Government. The U.S. also agreed to a Saudi proposal to consider setting up government-industry committees: composed of prominent American and Saudi participants from the private sector to work together to further the aims of the cooperative arrangements between the two countries." They were also considering a U.S.-Saudi Industrial Development Council, which could include government as well as private enterprise representatives.

June 17: */ Saudi Arabia reached an interim agreement with Aramco to increase its ownership from 25% to 60% retroactive to January 1, 1974.

June 17: */ Yamani revealed that the ministers of OAPEC had dropped the quota system under which oil exports to consuming countries were allocated on a "friendly" and "unfriendly" basis. This meant that the embargo on Holland and Denmark (which were retained at the June 1-2 meetings) was effectively inoperative. The international oil companies were free to resume normal marketing distribution, and that included

1974 (cont'd)

June 17: */ Scandinavian countries, as well as Portugal, Rhodesia, and South Africa. Yamani also revealed that the 15% production cutback was a dead issue and that each Arab state would set its own production level.

June 17: */ The Arab oil states informed the Organization of African Unity that oil prices were not negotiable and that preferential price treatment could not be extended even though they had supported the Arabs in the October war.

June 24: */ OPEC agreed to continue the price freeze for three more months but increased royalty payments by 2%. Saudi Arabia opposed a price increase and effectively offset the determination of the other OPEC states to see both prices and taxes raised. The 2% increase in royalties was expected to add 10 cents/bbl to government revenues. OPEC warned that new increases could be expected if the industrial states did not curbe their rates of inflation. Shaykh Yamani said that Saudi Arabia was seeking $10.70/bbl in buy-back negotiations with Aramco (92% of the tax preference price rather than the 95.7% that some states had been asking.) OPEC unity on policy was shown to be less than absolute when Yamani told the conference that his government would taxes were increased. Yamani was adamant against a have to "review its position in OPEC" if crude prices or proposal favored by a number of OPEC members to raise the tax rate on companies to 87% to siphon off "excess profits after prices quadrupled from crude in inventory,

1974(cont'd)

June 24:*/ but he said "this is no longer the situation... Since we are going to take over 100% ownership of our foreign partners soon, it would be ridiculous to set up a system to tax ourselves." In the post-conference commumique, Saudi Arabia was quoted as saying it "shall not associate itself" with the 2% royalty increases, thus revealing basic policy differences within OPEC.

July 1: */ Oil consultant Walter J. Levy cited four elements as essential to reach a "reasonable adjustment:" far reaching cooperation among the oil-importing nations; an understanding by the importing nations of the interests and aspirations of the producing countries; a clearcut (and painful) program of energy austerity by the oil-importing countries; and a recognition by the producing countries that even in an austerity situation any attempt to hold prices high must result in worldwide dangers to which they could not be immune."

July 8: */ Indonesia, Venezuela, and Ecuador increased their oil prices effective July 1.

July 10-11: The Arab oil ministers officially lifted the embargo against the Netherlands "in appreciation of the desired relations between the Arab nations and the European communities." The partial embargo against Denmark had already been tacitly withdrawn. In the strongest statement by a Saudi official since the lifting of the embargo, however, Shaykh Yamani warned that the embargo could be reimposed "very soon", unless the Arabs received assurances

1974 (cont'd)

July 10-11: that Israel would give up territory conquered during the 1967 June War.

July 15: */ Auctions of government-owned oil in the Middle East proved unsuccessful. Iran received bids well under the 93% of tax-reference price they were seeking and had only one bid (for 8,000 b/d) at that level. Kuwait auctioned 1.25 million b.d and demanded minimum bids of 95.7% but received none. Japanese bidders bid not more than 86.6% of tax reference.

July 15: */ The U.S. issued strong warning to OPEC against using production cutbacks to reduce supply surpluses. Treasury Undersecretary Jack Bennett warned that further production cutbacks, would be "counter productive" and called for rollbacks in foreign crude prices as "the appropriate remedy." Saudi Arabia also opposed a cutback.

July 15:*/ The "Group Twelve" established at the Washington energy conference reached tentative agreement on an oil-sharing plan to combat any future embargoes or cutbacks. The plan established two "trigger-points." The first would come into play in the event of an embargo of all consumers, and would be "triggered" by a 10% shortfall in consumer-country stocks. The new French Government indicated, through diplomatic channels that it was ready to join the consumer bloc.

1974(cont'd)

July 29:*/ Kuwait Coil Co. capitulated to the Kuwaiti Government's demands of $10.95/bbl for its participation crude (94.8% of the tax-reference price) for the third quarter of 1974. It was brought about by the Government's threat to deny crude to Gulf and BP (the owner of KCO), either by selling it to others (perhaps at a lower price) or by shutting in the production. Before this action, no purchaser of international crude had paid more than 93% of the tax-reference price.

August 5: */ A Harvard report for the Senate Foreign Relations Subcommittee on Multinational Corporations claimed that the U.S. lost only a slightly larger proportion of its oil supply than other nations the previous winter although it was the main target of the Arab oil embargo from October to March.

The reason given was that international oil companies allocated supplies equitably among all markets. They negated the embargo efforts against the U.S. for the most part.

August 12: */ Corporate documents released by Senator Frank Church revealed that U.S. officials ignored oil-company warnings of Arab willingness to use oil as a weapon months before the embargo was imposed. Saudi King Faisal reportedly demanded that the U.S. limit its support to Israel before and during the October War. Exxon, Mobil, Texaco, and Standard Oil of California policed the embargo for the

1974 (cont'd)

August 12: Saudis by preventing oil shipments to the U.S. Aramco said that had it not complied, its total production would have been stopped. The companies had sent urgent warnings to the Administration stressing King Faisal's dissatisfaction beginning four months before the war, but were unable to convince the Administration of the seriousness of the situation. The messages were acknowledged but it was doubted that any measures were necessary.

Senator Church accused the Aramco partners with being less interested in keeping the price down than in control of crude oil through preferential buy-back arrangements. "These company objectives are not necessarily best for the American consumer and the parameters of negotiations between the companies and the Saudis should be subject to careful U.S. Government supervision," said Church. He added that during negotiations Mobil, having the smallest Aramco interest, "threatened to make a deal with the Saudis outside the Aramco framework so that it would not be tied to its 10% equity interest in Arabian crude."

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1974 (cont'd)

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1974 (cont'd)

August 12: The action stemmed from the Saudi failure to line up support of other major producing states -- notably Iran -- in its drive for lower prices. Iran had threatened for the first time to cut back crude production in order to sustain high prices.

August 12: */ A preliminary agreement setting up a mechanism to share oil supplies in emergencies was reached by 12 major oil-consuming countries in the Energy Coordinating Group in Brussels. The 12 nations agreed to pool their available oil supplies for sharing among them should there be another embargo or cutback in production. A "big majority" of the group, however, could overrule a request by one or two members to activate the emergency measures. The agreement also called for joint plans for massive stockpilling of oil and for reducing energy consumption by 7-10% in an emergency. The group was thereafter called the International Energy Agency (IEA). The 12 nations are the U.S., Canada, Britain, Norway, West Germany, Denmark, Italy, Holland, Belgium, Ireland, Luxembourg, and Japan. France did not join the agreement. The intent of the agreement was to avoid a scramble of oil during an embargo or cutback situation which would send prices soaring again and cause severe economic difficulties. The agreement grew out of the February meeting in Washington of the major consuming nations.

1974 (cont'd)

September 2:*/ FEA estimated the cost of the Arab oil embargo to the economy at $10-20 billion, 500,000 jobs, and a 30% increase in the cost of living.

September 9: */ Abu Dhabi reached a participation agreement with Abu Dhabi Petroleum Co (BP, France's CFP, Mobil-Exxon-Shell, and Partex) for 63%, which was not protested. The company agreed to pay a buy-back price of $11.93/bbl (94% of the tax reference price) retroactive to Jan. 1, 1974.

September 9:*/ Harry Bridges, president of Shell Oil Co., said that he did not expect a breakdown in OPEC's united front. He held little hope for a cut in the world crude prices and pointed to recent cutbacks in production by exporting nations to "help contain an oil surplus of about 4 million barrels a day which existed recently." He warned that the OPEC countries could quickly reverse any predictions that crude will be an ample supply by sharply cutting back production.

September 16:*/ The Venezuelan Government announced that its crude oil production would be reduced to an average of 2.6 million b/d. 22.7 % below the average for 1973.

September 16:*/ The National Petroleum Council proposed a national security oil storage of 500 million bbl/ to protect against future oil embargo. The oil would be stored in salt domes on the cost of the Gulf of Mexico.

September 23.*/ OPEC at its ministerial conference in Vienna, agreed to freeze crude prices for fourth-quarter 1974. Most members planned, however, to obtain higher royalty and tax payments

1974(cont'd)

September23:*/ from the oil companies in a move to reduce what it calls their "excessive profits." An OPEC-wide call for production cutbacks in member states, which also had been widely anticipated, didn't materialize. Many of them, (Iraq, Libya, Kuwait, Venezuela, and Algeria) had already made substantial cutbacks. And others weren't willing to do so. Immediately after the conference, Abu Dhabi jointed the list with a 300,000 b/d production cut. In a communique following the Vienna conference, OPEC urged that the increases "should not be passed to consumers, taking into consideration the excessive margin of profits still being made by the international oil majors on their upstream operation." Saudi Arabia tabled a proposal at the meeting calling for a reduction in tax-reference crude prices to give some relief to consuming-country budgets, but the move failed -- even with support by influencial OPEC members such as Algeria, Kuwait, and Iran. Saudi Arabia said that it might "reconsider its attitude toward OPEC." The Saudis disassociated themselves from the increases in royalty and tax payments, in view of their pending 100% takeover of Aramco.

September 23.*/President Ford, in an address to the U.N. General Assembly, warned Arab producers against futher use of oil as a political weapon. "It has not been our policy to use food as a political weapon, despite the oil embargo and the recent oil price and production decisions." The implication was that if OPEC producers harm major

1974 (cont'd)

September 23:*/ industrial nationas, with more oil cutbacks or higher prices, political and economic countermeasures could result.

September 23:*/ Federal Energy Administrator John C. Sawhill said: "There comes a point where the conditions under which oil is supplied lose their commercial character and become issues of national survival. At that point -- and we have long since passed it-- we must explore the full range of options at our disposal to protect the national interest."

September 25: Schlessinger was quoted as saying that the United States regarded the problem of oil prices as onw that is detrimental to the world's econmy, but it expected to have a solution to the problem through negotiations and amicable discussions. The United States, he said, was not anticipating that there would be military conflict. Schlessinger also ruled out the possibility of using military sales as a lever in negotiations with the OPEC countries.

September 30:*/ Venezuela abolished tax rebates to oil companies which had served as incentives for new capital investment.

September 30:*/ The U.S. conceded that it had no policy or program to bring about a reduction in world oil prices. At the same time, officials (Simon, Morton, and Sawhill) said that consuming nations could not long absorb the economic impact of current prices, which increased fourfold over the year before. Nor, they added, was there any market pressure to reduce oil prices, given recent actions of OPEC producers to trim output to avoid surpluses at depressed levels

1974(cont'd)

September 30: of demand. Efforts to increase domestic energy supplies and develop new sources outside OPEC nations were not expected to be productive for several years and could not influence prices. FEA international specialists were critical of industry's failure to articulate the future role it saw for itself in these new circumstances. They considered that concessionaires had lost virtually all price bargaining power and were forced to make concessions to OPEC nations in order to maintain access to the oil production they formerly controlled. This failure to define a viable new role, FEA maintained, encouraged governments to step into the vacuum and shape that new role. The multinational companies were seen as indispensable to orderly growth of production and distribution world-wide for the foreseable future. Where their supply or price decisions had political and economic inpact, however, FEA claimed that consuming governments not only had the right but the obligation to assure that the interests of consumers were protected.

September:30* / The World Energy Conference was held in Detroit by 4,000 delegates from 80 countries. The U.S. used the conference as a platform to attack OPEC for the sharp increase in world oil prices. President Ford said "on Sept. 23rd, "If we lapse into a confrontation of exporters and consumers or an unseemly scramble of consumers being played off one against another, all hopes for a global solution will be destroyed." Shaykh Yamani defended the OPEC

1974 (cont'd)

September 30:*/ action by pointing out Middle East prices were depressed for many years when they were controlled by the oil companies and that price increases were not confined to OPEC nations. He cited Canada and the U.S.S.R. as two exporters outside OPEC who had raised prices. "In the 1950's and 1960's, the decision makers for Middle East crude prices were the oil companies, and the price they set varied from $1.75/bbl to $2.18/bbl for shorter periods and stabilized around $1.80/bbl for 11 years," Yamani said. "The realized price had always been much lower than the posted, approaching $1.40 in the late 1960's." He added that prevailing prices were $2/bbl too high and should be cut back. He said that Saudi Arabia was under pressure to reduce its production but would hold it at 8.5 million b/d. If agreement could be reached in OPEC to lower posted prices, Yamani said, "then there will be an automatic reduction program." He said OPEC countries including Saudi Arabia then would "produce according to demand." Yamani warned of a major recession ahead, but said he hoped "that the world would recover to avoid a depression." He admitted that rising oil prices have contributed to inflation and that this was the Saudi's reason for wanting lower posted prices. "We believe that the present price is higher than consumers can afford." "We think that the price increases that took effect the first of this year have covered all the inflation of the last 10 years and probably until 1976. We don't think we should ask for any more increases."

1974(cont'd)

September 30:*/ In spite of its failure to win OPEC approval of Saudi pricing proposals, Yamani said Saudi Arabia was not reconsidering its membership in OPEC and that rumors to this effect "were wishful thinking." "No one," he said "can afford to destroy OPEC."

October 7: */ The Shah said that Iran would press for such a fixed price (subject to crude origin and quality) at the Dec. 12 OPEC meeting which was set prices for first-quarter 1975. Reacting to the Gerald Ford and Henry Kissinger speeches at the recent World Energy Conference, the Shah said he hadn't studied them in detail, but that "nobody can dictate to us. Nobody can wave a finger at use, because we can wave back." The oil-producing nations, he added, must buy essential goods like food at prices that are fixed by others, "They say take it or leave it," he said, "and we have to take it."

October 7:*/ Royal Dutch/Shell said that its integrated profit margin on oil trading outside North America was about 50 cents /bbl and that this margin "is barely adequate for the maintenance of the business and totally insufficiant for the heavy investment required if energy is to be provided in the future." Shell also said "In its communique OPEC stated that the tax and royalty increases should be absorbed by

1974 (cont'd)

October 7: */ the 'excessive margin of profits' of the oil companies. This is impossible on current figures," the company stated.

October 7: */ Venezuela increased it tax take from the oil companies by 3.5% retroactive to the first of the year. Indonesian froze its prices as demand for its oil began to drop.

October 7:*/ Kissinger told the foreign ministers of France, West Germany, the U.K. and Japan that a 15% cut in oil demand, accompanied by diplomacy, would persuade OPEC producers to lower oil prices. Most countries, except the U.S., were openly skepical that prices could be lowered and that in any case, they were not willing to use their economic or political leverage to attempt such a reduction. Their major concern, discounted by Secretary Simon, was the need for OPEC to convert petrodollars into loans to poorer consumers. It was suggested that the major oil consumers, through international facilities, would thereby be responsible for keeping oil prices high.

Ocotber 14:*/ U.S. Ambassador to Saudi Arabia, James Akins said that the Saudi's "lone voice" within OPEC had been instrumental in keeping oil prices from rising 50% above their prevaling level and in seeking price reductions. He emphasized that it was not the policy of the U.S. to destroy OPEC. Akins also cautioned that if nothing is done by the industrialized countries to combat inflation, cut consumption and improve relations with the producing countries, oil could go to $20/bbl.

1974 (cont'd)

October 14:*/ Libya cut its oil price by 80 cent/bbl.

October 14:*/ Shaykh Yamani warned that failure of peacemaking efforts in the Middle East and continued occupation by Israel of Arab lands would result in a new war and an embargo on oil shipments. He also suggested that the right way to go about efforts to reduce prices was in a conference of seven or eight nations representing three groups --OPEC, industrial nations, and oil importers among developing nations. The agenda would have to be broader than just prices, Yamani insisted, including needs for technology, industrialization, guarantees on foreign investment of oil revenues, and a fair return of those investments.

October 21:*/ John Lichtblau of the Petroleum Industry Research Foundation said that even if the long-sought Middle East peace settlement were obtained, "the Arabs would hardly feel a moral obligation to lower oil prices in gratitude for the help received from the West... The five Arab members with surplus oil revenues-- Saudi Arabia, Kuwait, Abu Dhabi, Qatar and Libya-- would be opposed by the eight other members of the organization who strongly want oil pices to stay at least where they are now but preferably move up in line with world inflationary trends... Six of these members -- including Iran and Venezuela, the

1974 (cont'd)

October 21: */ second and third largest exporters -- are not Arabs and have, therefore, nothing to gain by accepting any price cut in return for a settlement of the Arab-Israeli dispute. Algeria and Iraq would oppose the price cut for economic reasons." The breakup of OPEC could result in uncontrollable price cuts, which no Arab oil producer would want to bring about, Lichtblau said. He doubted that Saudi Arabia, the most likely proponent of a price cut related to the settlement with Israel, could single-handledly bring down the OPEC price because of its production potential. He also disputed the OPEC argument that oil-price hikes were necessary to offset world inflation trends. However, Litchblau pointed out, world export prices of manufactured goods had risen by about 50% in the last 4 years and per-barrel government oil income by 950%. "In fact, using any postwar year prior to 1970 as a base, world prices would have to rise at an annual rate of 13-14% for the nest 15 years to catch up with the world oil price increases that have taken place." If OPEC were to set its price only hight enough to meetits maximum import and internal investment requirements, there would be no world oil price crisis, he said.

1974 (cont'd)

October 21: */ Algeria reduced its oil price by 70cents/bbl and Abu Dhabi reduced its tax-reference price from 94.8% to 93% or 23 cent/bbl.

October 21:*/ Saudi Arabia decided to fully apply the last two OPEC price-increase formulas contrary to earlier Saudi promises to keep prices down. Aramco was told of the policy shift at a secret meeting in Florida on Sept. 27. The increase was to consist of higher buy-back prices for government participation crude oil, third-quarter royaly payments were to be based on 14.5% of posted prices rather than 12.5% fourth-quarter royalty was to be 16 2/3% as part of the 3.5% increase in govenment take decided at the Vienna OPEC meeting.

October 21:*/ French Foreign Minister Jean Sauvagnargues said that France had not yet decided to join the IEA. Sauvagnardes said that France was opposed to IEA on two counts. The plan implied the "wrong approach" to the oil problem, and it could hamper development of an "autonomous" EEC energy policy. The core of the oil problem, he said, was price, and that should be settled by a negotiated solution between producers and consumers. Some solidarity among consuming countries was needed, including poor countries like India and Bangladesh, but such solidarity must not lead to confrontation with OPEC states, he said.

1974(cont'd)

October 21: */ Mexico announced that it would sell its newly discovered reserves the world market price and would not undercut OPEC.

October 24:*/ French President Giscard d'Estaing issued a call for an international conference of both consuming and producing countries, noting that the two groups have many common interests and should examine their problems together rather than in confronting groups. His move was seen an attempt to upstage IEA at the very moment of its creation. The London Financial Times said "it looks at best a duplication of efforts already under way, and at worst a hindrance."

October 28:*/ The draft blueprint for Project Independence which called for increased domestic supply along with conservation measures and emergency storage, was released by FEA. The Agency said that the global-market oil price would likely level off at $7/bbl.

October 28:*/ President Perez of Venezuela declared that all U.S. and other foreign countries operating in Venezuela would be nationalized by the end of the year.

November 4:*/ The IEA began to take definite shape, as participating countries filed formal approvals of the plan with the Brussels headquarters of the body. IEA expected to begin functions on Nov. 18, under the chairmanship of Etienne Davignon, Director-general of Belgian foreign policy. Approval of the plan had been received from the United Sates, Japan,

1974(cont'd)

November 4: */ West Germany, Britain, Belgium, the Netherlands, Denmark, and Luxembourg. Late approvals were expected from Italy, Canada, and Ireland, but Norway was not expected to go along. France continued to avoid the group, but Henri Simonet, energy commissioner for the European Economic Community, forwarded a plan to bring France into the emergency oil-sharing plan through a Common Market oil-sharing policy which would permit the French to take part in the plan even if they continued to boycott IEA, which was to function under the aegis of the Organization for Economic Cooperation and Development (OECD).

November 4:*/ Government-financed, long-term export credits were to be banned to major industrial nations and oil-producing countries under an agreement signed by the U.S., Britain, France, Germany, Italy, and Japan. The agreement also set a minimum interest rate of 7.5% for long-term government-financed export credits and bans interest subsidies for credits exceeding 5 years.

November 11:*/ Lt. Gen. Sutowo, president-director of Indonesia's state oil company, said that the high prices will stimulate new production and also development of alternative energy sources. He justified the prices on two other grounds: they they represent a "just trade for an irreplaceable resource" and that they will help close the "ever-widening" gap between

1974 (cont'd)

November 11:*/ the standard of living of Indonesia and the United States and other industrialized countries. Revenue received by the developing countries for their oil will create profitable new trading partners and ease world tensions, Sutowo said.

November 11: */ Norway officially notified the IEA that it would not participate in the group.

November 14:* Saudi Oil Minister Yamani said that Saudi Arabia had a plan to give back to the consumer the increased revenues it would gain from the tax and royalty increases imposed in the Abu Dhabi meeting. "I want to deny categorically," he declared, "that Saudi Arabia wants to make additional money. We don't want a single dollar from what took place in Abu Dhabi. We want to pass it completely to the consumers." He hinted further that the plan would reduce the amount of oil available to the Aramco partners.

November 18:*/ Turkey, Spain, Austria, Sweden, and Switzerland expressed their intention to join the IEA. The 12-nation Energy Cooperating Group held its last meeting in Brussels, and henceforth, it was to be known as the IEA, operating as part of the Organization for Economic Cooperation and Development (OECD), with headquarters in Paris. Norway, while declining official membership, said it would

1974 (cont'd)

November 1[illegible]:*/ be a non-voting representative, and it might be willing to share more oil than the agreement required; it wanted freedom of action. The Swedes, Swiss, and Austrians wanted an amendment to the agreement which would protect their traditional neutrality.

November 18:*/ Treasury Secretary William Simon said that the Arab oil exporters did not have the U.S. in a "perilous, unbreakable hammerlock." He said a combination of development and conservation could sharply reduce the current U.S. dependence on foreign oil. He added that OPEC prices would come down sooner or later.

November 25:*/ Saudi Arabia surprised the industry and its Organization of Petroleum Exporting Countries (OPEC) partners by annoucing it would offer 2-3 million b/d of state-owned crude oil for direct sale on world markets, the largest amount of participation crude ever offered by a Middle East producing country (a quarter of Saudi Arabia's daily production of 8.5 million b/d). The Saudi move was seen as a pressure tactic against the four American shareholders of Aramco. None of the big international oil companies were to be permitted to buy the crude. The principal buyers were to be independents and the governments of consuming countries. By selling such a volume of oil

1974 (cont'd)

November 25:*/ on a world market already in surplus, it was thought that the Saudis were hoping to force down crude oil prices. This would have improved their status with the consuming countries and strengthened their position at the next OPEC ministerial meeting in Vienna, December 12.

November 25:*/ The U.S. asked Western Europe, Japan, and North America last week to join in an "international financial safety net" to deal with deficits caused by soaring oil-import bills. The common loan and guarantee facility, to be funded with up to $25 billion in 1975 and that much more in 1976 would aid nations adopting programs to cut their dependence on foreign oil.

Secretary of State Henry A. Kissinger proposed that by the end of 1975 the industrialized nations reduce their oil consumption by 3 million b/d below what it would be otherwise. The basic principles of the financing facility were

(1) Participation should be linked with a commitment to cooperate in reducing dependence on oil imports.

(2) Participants would avoid resorting to trade restrictions or other "beggar-thy-neighbor policies."

(3) The facility should supplement private market channels and other channels, including the International Monetary Fund, lending money on market-related terms.

1974(cont'd)

November 25:*/ (4) Decisions on financial support should be made by a weighted vote of participants, based on the overall economic position of the borrower, not just the oil-import bill.
(5) All members should share the credit risk on the basis of their share of participation.

December 2:*/ The four shareholdees of Aramco (Mobil, Texaco, Exxon, and California Standard) submitted a formal letter to the Saudi government offering the state 100% interest.

December 9:*/ Abu Dhabi announced plans to take over 100% of its oil operations.

December 23:*/ The U.S. agreed to 1975 talks between exporting and consuming countries, while France yielded to U.S. insistence on a unified consumer negotiating position. Both OPEC members and consumers planned strategy sessions for a global energy conference.

December 23:*/ EEC member nations committed themselves to reduce reliance on oil and gas imports from 63% of energy requirements to 40-50% within 10 years. They further agreed to check the growth rate in energy consumption by 15% through conservation, while pushing nuclear energy and other indigenous sources.

December 23:*/ Saudi Arabia, Qatar, Abu Dhabi increased the royalty to 20%, the tax rate to 85%, and the crude cost to companies by 55 cents/bbl.

1975

January 3: Secretary Kissinger stated that the U.S. was considering the use of military force in the Middle East as a policy option. The White House "made it clear that the statement was supported by President Ford." Kissinger said:

> I am not saying that there's no circumstances where we would not use force. But it is one thing to use in the case of dispute over price, it's another where there's some actual strangulation of the industrialized world... Any President who would resort to militaRy action in the Middle East without worrying what the Soviets would do would have to be reckless. The question is to what extent he would let himself be deterred by it. But you cannot say you would not consider what the Soviets would do. I want to make clear, however, that the use of force would be considered only in the gravest emergency.

January 5:**/ Foreign responses to the Kissinger statement began to appear. The Iranian newspaper Kahyan, headlined "New Threat of Doctor K," and stated that "Iran cannot remain indifferent toward these threatening words, even if they are amended and modified later." Palestinian Liberation Organization leader Yasser Arafat said that "the United States is dangling a threat to intervene militarily to occupy oilwells"; while the Beirut newspaper, Al Moharrer, printed a cartoon showing Kissinger dressed in a Nazi uniform and wearing the Star of David. The Iraqi newspaper, Tarig Ash-Sha'b charged that Kissinger "threatened to use force against these (oil-producing) states if they do not reduce oil prices." The statement "provoked angry and worried

*/ Adapted from "Misjudjments in the Middle East, placed in the Congressional Record (S. 790) on January 23, 1975, by Mr. Helms.

1975 (cont'd)

editorials, news articles, and comments by Government officials" when reported in Germany, according to a New York Times dispatch. "West Germans, even those at the highest levels, are worried about being drawn into an American military adventure in the Middle East and remarks like Mr. Kissinger's make their fears seem real." In a television interview, Dr. Armin Grunewald, a Government of Germany was "not interested in any kind of confrontation with the oil countries, but rather in cooperation ... we do not have the use of force in mind, and do not share such thoughts." And Martin Bangemann, General Secretary of Germany's Free Democratic Party said that Kissinger's remarks reminded him of "gunboat diplomacy."

January 6:**/ The nuclear aircraft carrier Enterprise and five other vessels left Subic Bay in the Phillippines. The task force headed in a southwesterly direction, away from Indochina, with orders to enter the Indian Ocean by way of the Straits of Malacca. With the Enterprise was a battalion of Marines. The Pentagon refused to disclose the destination of the task force, but indicated that the task force might remain in the Indian Ocean for a considerable length of time. Included in the task force with the

1975 (cont'd)

Enterprise and the battalion of Marines were two destroyers, a supply shipand the guided-missile cruiser, "Long Beach." News of movement by the task force was not reported in American newspapers until January 10.

January 6: */ Iran has signed a letter of intent with El Paso Natural Gas Co. and Belgium's Sopex and Distrigaz to establish the world's biggest liquefied-natural-gas project. Initial cost was estimated at $5.9 billion over 25 years and first deliveries to the U.S. and Europe were envisioned for the early 1980's. The three western companies were to hold 50% interest and National Iranian Gas the other 50%. The cost figure included the needed liquefaction and terminal facilities plus the purchase of 34 LNG tankers.

January 7: **/ The first major Arab response to the Kissinger statement appeared. Egyptian Information Minister Ahmed Kamal Abul Magd said that Secretary Kissinger's statement had been "unnecessary, untimely, unacceptable on its merits and did not serve the cause of American-Arab relations or the cause of peace in the area." Having opened a new era of good relations with the United States, Egypt had gone out of its way to refrain from statements that could jeopardize that friendship, and that the Kissinger statement "does not help improve our relations." On

1975 (cont'd)

the same day, Egyptian press gave headlines to what it called Kissinger's "threat" and to rebuttals by various Arab leaders, and especially to the statement of Algerian President Houari Boumedienne. Boumedienne declared that "the occupation of one Arab state would be regarded as an occupation of the entire Arab world," adding that American military agression would bring about the destruction of the oil fields. The Egyptian government endorsed the Boumedienne statement.

January 8:**/ The Shah of Iran began a five-day visit with Egyptian President Anwar el-Sadat in Cairo. The purpose of the visit was to stress Islamic unity--the Shah was switching sides.

January 9:**/ Egyptian President Anwar el-Sadat, in an interview published in a Beirut newspaper, said that Arab countries would blow up their oil wells before allowing them to fall under control of invading forces from the United States. Meanwhile, French television ran a television program showing U.S. Marine military maneuvers in the Mediterranean. Depicted was an invasion exercise on the island of Sardinia, involving 2000 Marines. "We don't want to invade, but we are prepared," stated Vice Admiral Frederick Turner. "I assure you in all confidence that we could carry out any mission entrusted to us--any mission," Turner said.

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1975 (cont'd)

January 10:**/ The first press reports of movement by the Enterprise task force appeared. The State Department denied speculation that the task force had anything to do with the deteriorating situation in South Vietnam and Cambodia. Meanwhile, speculation was widespread in the Middle East that the task force was moving into the Indian Ocean to add muscle to the Kissinger statement.

January 10:**/ The New York Times article interviewed with several American military officials on the feasibility and potential for success of a U.S. military intervention in the Middle East. "Senior military officers consider the seizure of selected Middle East oil fields military feasible but politically disastrous," said of the generals interviewed in the article. Nonetheless, "allied officers feared the effect on the North Atlantic Treaty Organization of a unilateral American action. General Johannes Steinhoff, the retired West German Air Force officer who was chairman of NATO"s military committee from 1971 to 1974, said the alliance reaction to Mr. Kissinger's words had been an exasperated: "For God's sake,'" the Times article pointed out in reference to reaction to the statement from military officials outside the United States.

1975 (cont'd)

January 11: **/ A U.S. Seventh fleet task force led by the Enterprise passed Singapore en route to the Strait of Malacca and the Indian Ocean, according to a UPI dispatch from Singapore quoting local private ship pilots.

January 16: **/ In an interview appearing in Time magazine, President Gerald Ford Stated that he backed the view expressed by Secretary of State Kissinger on the possible use of force against the oil-producing countries of the Middle East. "His language said he wouldn't rule out force if the free world or the industrialized world would further that the prospects for war in the Middle East were "very, very serious... Every day that pases becomes more dangerous."

January 16: Egyptian President Sadat set a three month deadline for simulataneous Israeli withdrawal from the Egyptian, Syrian and Jordanian territory it occupids. Otherwise, he said, he would abandon U.S. attempts at a step-by-step settlement of the Middle East situation in favor of a Geneva conference onthe issue, a plan long advocated by the Soviet Union. "If nothing is accomplished very soon, we will go to Geneva, all of us Arabs, and explode everything there," Sadat said in an interview with the Beirut newspaper An Nahar.

1975 (con't)

January 20:**/ An article by Bernard Gwertzman in the New York Times headlined "Threat of Force Serves as U.S. Weapon," in which Gwertzman stated that "In the weeks since the Business Week interview, despite the controversy, neither Mr. Kissinger nor any of his top aides have expressed regret about the strangulation remark."

January 21: **/ President Ford, in his news conference, reaffirmed his support for the Kissinger statement.

January 24-26: Oil, finance, and foreign ministers of member states of OPEC met in Algiers to discuss crude-pricing policy and lay plans for a summit meeting of OPEC heads of state. It was the first time that finance and foreign ministers had joined oil ministers in an OPEC conference. Algerian Foreign Minister Abdel-Aziz Bouteflika, accused the industrialized countries who had joined the IEA of "harboring a precise plan which is based on the threat of aggression." He denounced "threats of military intervention" against OPEC countries. Instead of force, he called for consultation between oil-producers, consumers, and developing countries. The minister said an oil embargo by the producing countries would be "an extreme measure" in retaliation for any action taken against OPEC members. OPEC froze on crude prices in the Persian Gulf area for all of 1975, and promised thereafter to tie them to world inflation rates. For 1976 and 1977, crude prices would

1975(cont'd)

February 10:*/ Secretary of State Henry A. Kissinger asked IEA nations to agree "that they will not allow imported oil to be sold domestically at prices which would make those new sources noncompetitive." Kissinger said importers would be willing to assure long-term markets for OPEC, possibly indexed to prices of world commodities, but only if OPEC were willing to reduce oil prices well below current levels. He did not say at what price level domestic energy should be protected, nor did President Ford in legislation sent to Capitol Hill. Kissinger said the proper level would be subject to further "technical studies, followed by consultation" with IEA allied. The purpose is to prevent OPEC from undermining investments made to attain independence from high-priced oil imports from cartel nations. Kissinger insisted that market pressures against OPEC are increasing. He said "As the industrialized nations reduce consumption and increase their supply, it will become increasingly difficult for OPEC to allocate the further production cuts that will be required among its members. Even now, some OPEC members are shaving prices to keep up their revenue and their share of the market."

1975 (cont'd)

February 10:*/ Kuwait formally requested an emergency meeting of OPEC to reconsider the crude-price situation. Kuwaiti Oil Minister Atiqi said the request stemmed from "the alarming depreciation of the U.S. dollar and its harmful effects on posted oil prices." There was growing concern in OPEC over the deteriorating state of the world oil market. Declining production (and with it revenues), overflowing storage of unsold oil, falling demand in consumer countries, and deflated tanker rates were beginning to worry the producers. The only apparent remedies were to cut prices or cut production still further in an attempt to sustain prices. That concern was beginning to show up in the shape of price drops -- not drops in postings, but drops in transaction prices and extended credits.

February 17:*/ The Krueger study, commissioned by FEA, advised the U.S. Government to take a more active role in the international oil agreements between producing countries and companies. The study recommended:

(1) Creation of an independent board, similar to the Federal Reserve Board, to review international oil agreements.

(2) Expansion of the consumer countries International Energy Agency, which would include international association of petroleum companies.

1976 (cont'd)

February 17:*/ (3) Initiation of broad-based consumer-producer country discussions, where solutions to the smaller, less volatile issues are sought first.

(4) Bilateral arrangements between the U.S. and producer countries where a "special relationship" is established without a discussion of supply or price.

"The fact that producer governments have become sellers of oil strongly suggests that governments of crude purchasers must influence the transaction to protect the interests of the consumer. ... We can not longer assume that, come what may, the companies can take care of themselves," the study said.

February 17:*/ Shaykh Yamani said that he would recommend extending the crude-price freeze beyond 1975 at the Feb. 19 OPEC meeting. He also said the Algerian proposals to link crude prices, inflation, oil-supply security, and financial equilibrum would require study both within OPEC and with consumers. In the event of another oil crisis, Yamani said he feels the International Energy Agency (IEA) plan for oil-sharing wouldn't work. "I do not take the IEA seriously," he said. He added that Saudi Arabia doen't approve of selling at preferential prices to developing countries and that Saudi policy is to sell for cash and not on deferred terms. He said he would, however, continue his campaign to freeze or lower crude prices.

1975(cont'd)

March 3:*/ The U.S. affiliate of the Shell group said it had reached agreement in principle with the Saudi Agency Petromin to build a $1 billion olefins-based comples at Al Jubail. Shell said the deal also gave it an assured supply of crude oil for its refineries in the U.S.

March 10*/ The Government of Kuwait announced "effective immediately" full nationalization of Kuwait Oil Co., a partnership of British Petroleum and Gulf Oil, a take-over of the companies' remaining 40% interest in KOC.

March 10:*/ Algerian President Boumedienne said that OPEC might be prepared to renounce crude-price inceases--except to compensate for inflation -- for the remainder of the 1970's. He declared that OPEC had no desire to contribute to deterioration of the western economies. "If prices have to be frozen, we will freeze them. If they must be decreased, we will decrease them -- provided that the developed countries make a similar and silmutaneous effort in return." IEA worries OPEC but does not intimidate it, he said. "Nothing would be easier than to frustate any agression, from whatever quarter, undertaken with a view to grabbing our oil facilities."

March 16: The Ninth Arab Petroleum Congress, meeting in Dubai, approved several resolutions aimed at absolving the Arabs of responsibility for the world energy crisis. One declaration endorsed the use of oil as a political weapon, especially in the struggle with Israel.

1975 (cont'd)

March 17:*/ Consuming-nation officials could not reach consensus on an oil-price floor or on methods of dealing with possible OPEC price cuts, but they did embrace the "concept" of price-cut protection. Specifics were left up to individual member nations.

March 31:*/ OPEC was urged by its economic commission experts to adopt a program of planned cutbacks in oil production to cope with the world's growing surplus of crude oil. The commission's report said that the consuming countries could but consumption by as much as one-third over the rest of the decade and warned that the decline in the importance of oil as an energy sources was more serious than OPEC wanted to believe. It was also unsure of means whereby prorationing of production among its members could avoid the failure of the mid-1960's.

April 21:*/ The oil-consuming nations met with the oil-producing states in Paris for what was supposed to be an "oil" dialogue. The consumers had been invited by France to a "preparatory meeting for the International Conference on Energy and Related Economic Problems." After their arrival, the French, in a gesture to Algeria, a leader in the third-world group, agreed to change the conference name to the "International Conference Proposed by the President of France." The consumer-country delagates were surprised at the intransigence of the other side. For 9 days they persisted in their efforts to confine the agenda

1975(cont't)

April 21:*/ of any future world conference to energy and energy-related problems, while the third world delegates just as persistently clung to their demand that the agenda be brodened to include all raw materials, world monetary problems, and other non-energy matters. The differences were so fundamental they could not even agree on a closing communique.

June 2:*/ The IEA held its first ministerial meeting in Paris and offered to resume the consumer-producer dialogue. The action followed a significant shift in the position of the United States Secretary Henry Kissinger told the meeting the U.S. was ready to accept broadening of the dialogue to include the whole relationship between developed and developing countries. It was pointed out that Kissinger had failed to mention that the U.S. proposals still call for separate sessions for discussion of raw materials and of energy, the cause of the earlier breakdown. Kissinger proposed that permanent commissions be set up by the oil producers, the consumer countries, and the developing countries to deal with all types of development problems, especially those involving energy and raw materials. Kissinger said the U.S. had not swayed in its opposition to indexing oil prices to world inflation rates. He also stressed conservation efforts, and for development of alternate

1975 (cont'd) induced conservation to policy-induced conservation," Kissinger said, "the producers will benefit from a stronger market, and we will become increasingly vulnerable to price rises and the political manipulation of energy supply."

June 9:*/ FEA recommended a U.S. contingency program based on future restricted supplies of crude oil. It concluded that by 1980-85, all countries will be in a production decline except for Saudi Arabia. Future supply restrictions, it found, may be due to economic factors rather than political ones.

June 16:*/ OPEC promised not to raise oil prices before September 30. At that time OPEC was to consider increases ranging up to $4/bbl to regain the purchasing power of their nations's income, which they claimed had fallen about 30-35% as a result of inflation since the last oil-price increase. Any increase would be in addition to a small hike resulting from a swich by the Organization of Petroleum Exporting Countries from dollar values to Special Drawings Rights (SDR) of the International Monetary Fund.

July 7:*/ The Joint Economic Subcommittee on International Economics urged the administration to drop its effort to win a minimum import-price floor agreement with other consuming nations. It said that a price floor was an inappropriate method to protect domestic investments in conventional energy resources and that the administration had no authority to set up a minimum price. The committee

1975(cont'd)
July 7:*/ preferred "a well-targeted subsidy program" as the means to protect U.S. domestic-resource investments in the event world oil prices dropped. The Subcommittee noted that (1) the present lack of a price guarantee has not deterred industry investment in new areas; (2) a floor price could easily become a massive across-the-board subsidy for large energy producers; (3) A high price floor could lock the U.S. into high-cost production by encouraging development of resources which might not otherwise have been economical; (4) The floor price could provide OPEC "with just the focal point at needs to maintain unity and prorate any reduction in output. The committee favored subsidies in the form of deficiency payments, loan guarantees, and joint Government-industry ventures.

July 14:*/ Venezuelan President Perez said that after nationalization his government would consider some type of participation in the industry by private foreign countries.

July 21:*/ Ecuador reduced the price of crude oil by 43 cents/bbl, and Indonesia's state-run Pertamina was reported to have approved some cut-rate sales as much as $2/bbl under the fixed price of $12.60/bbl.

August 11:*/ Shell President Bridges predicted that crude oil price increases by OPEC expected Oct. 1, would take the form of an "adjustment of equilibrium," with no hikes for higher priced crude and moderate advances for lower-priced crude. He also observed that the era of oil company as a primarily

1975 (cont'd)

August 11:*/ extractive enterprise on the international scene is ending. He expected. Bridges said he expected the role of the multinational oil company in producing countries to eventually evolve into that of a service corporation, "doing what we do best which is developing and applying high technology." "The balance is already gradually shifting from an emphasis on investment and production to an emphasis on services and technology transfer. The successful enterprise will be one which recognizes what is happening and takes advantage of it."

September 8 :*/ Venezuela set Jan. 1, as the date for nationalization of 21 private oil companies.

September 8:*/ U.S. Government officials protested another OPEC price increase but representatives of OPEC countries predicted such an increase would take place at their Sept. 24 meeting in Vienna. "Current price levels for international oil can be justified on neither economic nor financial grounds," Treasury Secretary William E. Simon told the IMF meeting in Washington. "Let there be no misunderstanding about the result of another major price increase: it would seriously jeopardize the balance upon which global economic recovery now depends... "Another price increase seems especially inappropriate in light of our efforts to address the legitimate problems facing the oil-exporting nations as well as other developing countries," Simon continued. He cited the efforts

1975(cont'd)

September 8"*/ to bring about a conference of consuming and producing nations, the proposals for a commission on raw materials, and special bilateral programs as proof of the U.S. effort to cooperate. "In turn," he said, "we urge that they work cooperatively with us and with other nations to enhance the prospects for a world economic recovery."

Jamshid Amouzegar, Iran's Interior minister, in a speech before the U.N., criticized both Simon's stance and one taken by Secretary of State Kissinger in an address before the U.N. read by the U.S. Delagate Daniel P. Moynihan. Amouzegar said it is likely that the OPEC nations will increase prices at Vienna, the increase will not be "in the 25-30% range." In his speech, Amouzegar said, "it is ironical by a curious logic that the fixing of oil prices by the major oil companies in the past was not considered a cartel action and yet today setting of prices by oil-producing nations in the excercise of their sovereign rights is so harshly criticized." Amouzegar argued that the OPEC price increase in December 1974, which nearly quadrupled oil prices, "was in response to the high rate of inflation in industrialized countries and such adjustment did not contribute but insignificantly to the rising level of prices and recessionary trend in these countries.

1975(cont'd)

September 8:*/ Additionally OPEC's action was "intended to put an end to the merciless exploitation of their (producing countries) precious depletable resources at ridiculously low prices." Another price increase will not likely result in drastic economic effects, Amouzegar reasoned after citing the unfulfilled predictions of "the doomsday theorists" who said that the 1973 price increase would doom the financial institutions, cause international disorder, give OPEC the power to buy controlling interests in all the world's major corporations and thereby become a "political blackmailer" by arbitrarily reshuffling its monetary reserves." Advocates of so gloomy a picture have now a change of heart," which has led to relief that "these problems are not intractable."

September 8:*/ PIRINC calculated that a price increase of 67 cents/bbl in Saudi Arabian marker crude oil would offset inflation that had occurred since Jan. 1, 1974, for industrial goods imported by oil-producing countries. This was far below the $3-3.50/bbl increase which several leaders of OPEC estimated as necessary to offset inflation.

September 15:*/ The Libyan Petroleum Ministry ordered Occidental Petroleum Corp. to cut back its production in three Libyan fields from 521,000 b/d to 210,000 b/d for "technical reasons."

1975(cont'd)

October 6:*/ The oil ministers of the 13 member countries of OPEC unanimously voted in Vienna to break the 9-month freeze of $10.46/bbl for Arabian Light 34 degree gravity "marker" crude. The price was increased to $11.51/bbl and frozen there until July 1, 1976. President Ford said he strongly regretted the OPEC price increases and Federal Energy Administrator Frank Zarb stated he was "mad and damned outraged."

October 20:*/ The Government of Venezuela offered $1.028 billion for assets of 19 foreign-owned companies which were to be nationalized Jan. I, 1976. Each company had 15 days from Oct. 13 to accept the government offer. Any company that rejected the offer was to be expropriated, and the Venezuelan Supreme Court would rule later on final compensation to be paid.

October 20:*/ Libya ordered all Occidental Petroleum production to halt and would not allowed any of the company's 520 foreign employees to leave the country. Libya said that the employees, including 230 Americans, were not being held hostage but that they could not leave until replaced by persons who could operate the oil fields in the Occidental concession. Occidental took the issue to the International Court of Arbitration in The Hague with $1 billion damage suit against Libya and was suspending payment of amount due Libya for previously produced oil pending outcome of settlement of the dispute.

1975(cont'd)

October 27:*/ Occidental Petroleum Co. charged that the Libyan Government was illegally attempting to sell Occidental's crude and other hydrocarbons and that it would take "appropriate action" against any purchasers.

October 27:*/ Nigeria and Venezuela increased prices by 10%, but Indonesia raised some of its prices only 2% and cut others.

November 3:*/ All but two of the foreign-owned companies operating in Venezuela accepted government compensation offers for assets to be nationalized Jan. 1, 1976.

November 18:*/ The OPEC finance ministers announced the unanimous decision to create a fund for interest-free loans for underdeveloped countries. The ministers voted a levy of 10 cents/bbl on crude-oil production of member countries to create the fund. The program was to be for 1 year during which some $1 billion collected by the levy would be loaned out. The adopted plan represented a considerable reduction from the proposal submitted to the ministers by Iran and Venezuela. This plan called for a levy of 10 cents per barrel, but for grants not loans, and would have extended for 5 years.

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1975(cont'd)

November 24:*/ Kuwait decided to reduce crude prices by 10.2 cents/bbl, an act which angered Iraqi officials. In an unprecedented move the Iraqi news agency was used by the Iraqi Government to make known its complaint. The agency message said lowering of the Kuwaiti price would "create disruption on the oil market and inspire competitive bidding among oil producers." Replying to the Iraq statement, Deputy Oil Minister for Kuwait Absel-Wahab Nasisi said that the Kuwaiti decision to reduce the price of 31 degree-gravity crude was taken after other gulf producers had refused Kuwait's invitation to meet and discuss the differentials problem last month.

November 24:*/ Kuwait threatened to cut off crude supplies to Gulf and BP if they did not accept the "take-or-pay" clause concerning agreed liftings in the negotiation, over Kuwaiti acquisition of the remaining 40% interest in Kuwaiti Oil Co. still held by the two. Shaikh Yamani said "Saudi Arabia, the world 's largest oil exporter, will not agree to sell to the two western companies as a result of the KOC dispute."

December 8:*/ After being in Israeli hands for more than 8 years, the major Sinai oil fields were returned to Egypt.

1975 (cont'd)

December 8:*/ British Petroleum Co. Ltd., and Gulf Oil Corp. signed a long-pending agreement to transfer their remaining 40% interest in Kuwait Oil Co. to the Kuwaiti Government. The agreement was retroactive to March 5, 1975 and provided compensation of $50.5 million, proportionately less than the $112 million the goverment paid last year for acquisition of a 60% interest in KOC.

December 15:*/ Occidental Petroleum Corp. and the Libyan Government resolved their dispute over Occidental's production of oil in Libya. It was permitted to produce at least 300,000 b/d for the next 3 years and was to be allowed another 2 years of similar production if it abides by "good oilfield practice." Under the agreement, production allowed for the 6th through 8th years were to be not less than 275,000 b/d and for the 9th and 10th years not less than 250,000 b/d. The new agreement provided that the company could resume its production from concessions 102 and 103, in which it holds a 49% interest. Also the company had the right to buy Libya's 51% share of production without financial loss. "The Libyan Government," Occidental said "expressed its intention to preserve on a continuing basis not less than a fair remuneration for Occidental." It agreed to dismiss its demands for arbitation of the dispute and pay Libya, in cash or notes, at least $272 million

1975 (cont'd)

December 15:*/ Occidental said that during the dispute it had held up "payables" to Libya of nearly $440 million. Interest was to be paid on any amount deferred.

December 21:*/ A terrorist attack brought an abrupt halt to a ministerial meeting of the Organization of Petroleum Exporting Countries in Vienna. The attack, in which at least three persons died and several others were injured prevented action on an OPEC differentials formula. The formula was to serve as a guideline on price rebates and premium allowed on crude sulfur content, freight rates, and gravity. Six terrorists initially held 60-70 hostages, including oil officials of 11 OPEC members. Among the hostages were Ahmed Zaki Yamani, oil minister of Saudi Arabia; Jaimshid Amouzegar, interior minister of Iran; and Valentin Hernandez Acosta, mining minister of Venezuela. Also held were oil ministers or representatives of Ecuador, Algeria, Gabon, Iraq, Indonesia, Libya, Kuwait, and Nigeria. The raiders, who said they represented the Army of Arab Liberation, demanded more oil wealth for Palestinians. They also an end to the Sinai disengagement pact between Egypt and Israel. Most of the hostages were released in Vienna when Austria bowed to terrorist demands for air passage

1975(cont'd)

December 21: out of Austria. The rest, incuding the oil ministers, were reported released in Algiers Dec. 22, where the terrorists surrendered to Algerian authorities.

December 22:*/ At the International Conference on Economic Cooperation in Paris, Secretary Kissinger declared it was time to reach a common evaluation of the relationship between changes in energy prices and the stability and performance of the world economy. Kissinger blamed the sudden spiral in oil prices for much of the world's economics problems. "Inflation, recession, and payments balances significantly worsened in all the industrialized world and in those developing nations which had realized substantial progress towards industrialization," he said. Any further increase in oil prices, Kissinger said, would seriously hamper economic recovery, retard international trade, compound the international difficulties of many countries, weakened the ability of the advanced nations to assist the development of poor countries, and strain the fabric of international cooperation. U.K. Foreign Minister James Callaghan, speaking separately from the EEC delegation, urged adoption of a floor price for oil imports to protect development of high-cost sources of energy importing countries.

1975(cont'd)

December 22:*/ Iranian Interior Minister Jamshid Amouzegar disputed charges that the energy crisis was triggered by embargoes and price hikes. Rather, he said, the problem stemmed from runwaway consumption of global oil resources. Moreover, he asserted, the problems of developing countries were tied more closely to world recession than to increased oil prices mandated by the Organization of Petroleum Exporting Countries. He also claimed that oil-exporting countries had given more money to world relief than wealthy consuming states have contributed. Secretary Kissinger recommended establishment of four commissions on international trade, a concession to the developing countries, following their demands at the Paris meeting with the consuming nations. The commission on energy was to promote an effective world balance between energy demand and supply. It was to work for practical cooperation among industrialized and developing countries to develop new energy supplies, and it was to lay the foundation for a mutually beneficial, long-term relationship between energy producers and consumers. The commission on raw materials, was to work to establish conditions for stable, long-term supplies of raw materials vital to global progress at prices both profitable to producers and fair to consumers.

1975(cont'd)

December 22:*/ The commission on development was to strive to accelerate economic development in all nations, especially the poorest. The commission on finance was to address financial issues as they relate to the work of the other three commissions.

December 29:-/ The IEA adopted a floor price of $7/bbl for crude oil. Reaction of OPEC states to a minimum safeguard price was mixed. Some saw it as an attempt to divert investment into non-OPEC energy sources. Others saw it as an endorsement of the OPEC action of October 1973 when prices were doubled. The $7 floor price was almost three times the price level of October 1973.

1976

January 12: */ Occidental Petroleum Corp. wrote off a $73.4 million investment in Venezuela and a $33.2 million investment in Nigeria because of nationalization of its interests in Venezuela and unsuccessful drilling in Nigeria.

January 19:*/ Indonesia said it would press for revision of production sharing contracts to increase its revenues by $280 million during the fiscal year beginning April 1st.

February 16:*/ Iran called on member companies of the Iranian consortium to account for their failure to lift crude oil at the rate agreed in 1973. Consortium companies then agreed to lift Iranian crude at a rate of nearly 5 million b/d. They also agreed to finance 40% of investment in new exploration and production projects in Iran. The Iranian claim was that company liftings in 1975 were more than 16% down on the agreed rate, while the rate of total liftings from OPEC countries last year was down only 8% from 1974. The situation was similar to that which evolved in Kuwait toward the end of last year when the partner companies in Kuwait Oil Co. ran into problems over a minimum lifting rate when the 100% nationalization of KOC was being negotiated.

February 23:*/ Iran unilaterally cut 9.5 cents/bbl from the price of its medium crude oil because of the reduced demand in the world market. Iran also brought diplomatic pressure to

1976 (cont'd)

February 23:*/ bear on the U.S., U.K., and French Governments in an attempt to persuade consortium companies to lift more crude to increase Iranian revenue. Shaikh Yamani also was quoted as saying he believed the Iranian price of $11.40 for heavy crude still was too high. He doubted than NIOC coul avoid a further price cut and that the Iranian price action was "the logical result" of failure of OPEC members to agree on differentials to apply to various grades of crude using Arabian light as a marker. Shaikh Yamani said Saudi Arabia would shut in "very soon" its Zuluf and Marjan fields, both producing heavy crude. Combined output amounted to about half of the country's heavy-crude production, which in turn made up only 5% of the 7 million-b/d total production. The action was considered necessary because the Saudis could not find a buyer for the output from the fields.

March 24: Saudi Arabia agreed to pay $1.5 billion to buy the last 40 percent of the Aramco from its four American partners. The service fee tentatively agreed on at a recent meeting in Panama City, Florida, was understood to be 20 to 22 cents per barrel, which would provide a payment of about $1.6 million a day to the four oil companies. The fee would cover production, expansion and exploration activities undertaken by the four companies for Saudi Arabia.

APPENDIXES

Appendix I

Oil Groups Producing and Exploring in Middle Eastern Countries

Oil Groups Producing and Exploring in the Gulf

Iran

OIL SERVICE COMPANY OF IRAN (OSCO)

CONTRACTOR: As from May 1973 the state-owned National Iranian Oil Company took over the administration of all fields formerly run by Iranian Oil Participants (the Consortium). Under a twenty-year agreement the Consortium companies became privileged buyers of Iranian crude. The companies established a new contracting concern, OSCO. This replaced the Consortium's previous operator, the Iranian Oil Exploration and Producing Company.

PRODUCTION (1974): 5.542 million b/d.

OWNERSHIP:

British Petroleum	40%
Royal Dutch/Shell	14%
Exxon	7%
Standard Oil of California	7%
Texaco	7%
Gulf	7%
Mobil	7%
Compagnie Française des Pétroles (CFP)	6%
Irican Agency	5%
Atlantic Richfield (Arco)	4/12%
Reynolds	2/12%
Charter Company	2/12%
Getty	2/12%
Continental	1/12%
Standard Oil Ohio (Sohio)	1/12%

NATIONAL IRANIAN OIL COMPANY (NIOC)

Operations at Naft-i-Shah: The state company has developed a field at Naft-i-Shah, on the border between Iraq and the province of Kermanshah.

PRODUCTION (1974): 18,000 b/d.

SOCIÉTÉ IRANO-ITALIENNE DES PÉTROLES (SIRIP)

PARTNERSHIP: Signed 1957. Twenty-five years from start of sales—1962. Three areas totalling 22,000 sq. km.: offshore northern Gulf, east-central Zagros, Gulf of Oman coast. All except producing areas now relinquished. Original exploration obligation $22 million. No bonuses.

PRODUCTION (1974): 36,000 b/d.

OWNERSHIP:

National Iranian Oil Company	50%
AGIP S.p.A.	50%

IRAN PAN-AMERICAN OIL COMPANY (IPAC)

PARTNERSHIP: Signed 1958. Twenty-five years from start of commercial production. Two areas totalling 16,000 sq. km. offshore. All except producing areas now relinquished. Original exploration obligation $82 million. Cash bonus $25 million.

PRODUCTION (1974): 132,000 b/d.

OWNERSHIP:

National Iranian Oil Company	50%
Standard Oil of Indiana (Amoco)	50%

IRANIAN MARINE INTERNATIONAL OIL COMPANY (IMINOCO)

PARTNERSHIP: Signed 1965. Twenty-five years from start of commercial production. Four areas totalling 7,960 sq. km offshore. Most now relinquished. Original exploration obligation $42 million. Expenditure guarantee $24 million. Cash bonus $34 million. Production bonus $10 million.

PRODUCTION (1974): 58,000 b/d.

Source: The Middle East and North Africa 1975-76, Twenty Second Edition, Europa Publications: London.

OWNERSHIP:

National Iranian Oil Company	50%
AGIP S.p.A.	16⅔%
Phillips Petroleum	16⅔%
Oil and Natural Gas Commission of India	16⅔%

LAVAN PETROLEUM COMPANY (LAPCO)

PARTNERSHIP: Signed 1965. Twenty-five years from start of commercial production. Three areas totalling 8,000 sq. km. offshore. Most now relinquished. Original exploration obligation $15 million. Expenditure guarantee $12 million. Cash bonus $25 million. Production bonus $6 million.

PRODUCTION (1974): 195,000 b/d.

OWNERSHIP:

National Iranian Oil Company	50%
Atlantic Richfield (Arco)	12½%
Murphy Oil	12½%
Sun Oil	12½%
Union Oil of California (Unocal)	12½%

IRAN NIPPON PETROLEUM COMPANY (INPECO)

PARTNERSHIP: Signed 1971. Twenty years from start of commercial production. Area in Lurestan of 8,000 sq. km. Twenty-five per cent relinquished. Exploration obligation $52 million. Expenditure guarantee $21 million. Cash bonus $40 million. Production bonus $10 million. Exploration in progress.

OWNERSHIP:

National Iranian Oil Company	50%
Teijin Ltd. & North Sumatra Oil Development Corporation	33.3%
Mitsui & Co., Mitsubishi Shoja Kaisha, & Mobil	16.7%

BUSHIRE PETROLEUM COMPANY (BUSHCO)

PARTNERSHIP: Signed 1971. Twenty years from start of commercial production. Area of 3,715 sq. km. offshore near port of Bushire. Twenty-five per cent relinquished. Exploration obligation $22 million. Expenditure guarantee $13 million. Cash bonus $5 million. Production bonus $6 million. Exploration in progress.

OWNERSHIP:

National Iranian Oil Company	50%
Amerada Hess	50%

HORMUZ PETROLEUM COMPANY (HOPECO)

PARTNERSHIP: Signed 1971. Twenty years from start of commercial production. Area of 3,500 sq. km. offshore near the Straits of Hormuz. Twenty-five per cent relinquished. Exploration obligation $20 million. Expenditure guarantee $8 million. Cash bonus $2 million. Production bonus $10 million. Exploration in progress.

OWNERSHIP:

National Iranian Oil Company	50%
Mobil	25%
Petrobras (Brazilian)	25%

SOCIÉTÉ FRANÇAISE DES PÉTROLES D'IRAN (SOFIRAN)

SERVICE CONTRACT: Signed 1966. Twenty-five years from start of commercial production. Onshore and offshore areas totalling 45,000 sq. km. Onshore and most of offshore areas now relinquished. Exploration obligations expressed in areas to be surveyed and numbers of wells to be drilled. No bonuses. Oil expected on stream in 1975.

OWNERSHIP:

Entreprise de Recherches et d'Activités Petroliers (ERAP)	48%
Aquitaine	12%
Mitsubishi	40%

EUROPEAN GROUP OF COMPANIES (EGOCO)

SERVICE CONTRACT: Signed 1969. Twenty-five years from start of commercial production. Area of 27,260 sq. km. plus territorial waters. Half now relinquished. Exploration obligations three wells and $10 million in first five-year phase. No bonuses. ERAP operator. Exploration in progress.

OWNERSHIP:

ERAP	32%
AGIP S.p.A.	28%
Hispanoil	20%
Petrofina (Belgian)	15%
Österreichische Mineralolverwaltung (OMV)	5%

PHILLIPS PETROLEUM (PHILIRAN)

SERVICE CONTRACT: Signed 1969. Twenty-five years from first commercial production. Onshore area of 32,860 sq. km. Forty per cent now relinquished. Exploration obligations three wells and $8 million in first five-year phase. Cash bonus $5 million during first five years. Production bonus $1–5 million depending on production levels. Exploration in progress.

OWNERSHIP:

Phillips	50%
Continental (Conoco)	25%
Cities Service	25%

TOTAL

SERVICE CONTRACT: Signed 1973. Onshore area of 8,000 sq. km. in Lar region. Exploration obligation $40 million in first five years. Cash bonus $6 million. Total may purchase 45 per cent of production for 15 years at 5 per cent discount. Exploration in progress.

OWNERSHIP:

Total (CFP)	100%

ULTRAMAR

SERVICE CONTRACT: Signed 1973. Area of 20,000 sq. km. in Lar region. Exploration obligation $14 million in first five years. Cash bonus $4.5 million. Ultramar may purchase half of production below 100,000 b/d at 5 per cent discount, reduced to 4 per cent if production exceeds 100,000 b/d. Exploration in progress.

OWNERSHIP:

Ultramar	100%

DEMINEX

SERVICE CONTRACT: Signed 1973. Areas of 14,500 sq. km. in Abadan and Shiraz regions. Denimex may purchase 30–45 per cent of production at 3–3.8 per cent discount. Exploration in progress.

OWNERSHIP:

Deminex (German)	100%

ASHLAND OIL PARTNERSHIP

SERVICE CONTRACT: Signed 1973. Acreage in Lar region. Exploration obligation $25 million. Contractors may purchase 50 per cent of production for 15 years at 3.5–5 per cent discount. Exploration in progress.

OWNERSHIP:

Ashland Oil	50%
Pan-Canadian Petroleum	50%

AGIP

SERVICE CONTRACT: Signed 1973. Area of 7,150 sq. km. in Lar region. Exploration obligation $20 million. AGIP may purchase 50 per cent of production for 15 years at 5 per cent discount. Exploration in progress.

OWNERSHIP:
AGIP S.p.A. 100%

Iraq

IRAQ NATIONAL OIL COMPANY (INOC)

Production and Exploration operations: INOC, the Iraqi state company, runs two production operations—the small Khanaqin field (formerly operated by BP) on the Iranian border, and the northern part of the Rumaila field, in the south of the country, which came on stream in 1972. INOC also manages the marketing of Rumaila crude. With the assistance of Russian and Hungarian drilling concerns INOC is appraising a number of other promising finds.

PRODUCTION (1974): 160,000 b/d.

IRAQI COMPANY FOR OIL OPERATIONS (ICOO)

Production operations: The state-owned ICOO was formed in June 1972 to take over the production operations of the nationalized Iraq Petroleum Company. ICOO manages production from the Kirkuk, Jambur and Bai Hassan fields on former IPC acreage, and from the Ain Zalah and Butmah fields on former acreage of the Mosul Petroleum Company (dissolved by the IPC group in early 1973). Marketing is managed by INOC.

PRODUCTION (1974): 896,000 b/d.

ENTREPRISE DES RECHERCHES ET D'ACTIVITÉS PETROLIERS (ERAP)

SERVICE CONTRACT: Signed 1968. Areas totalling 10,800 sq. km. onshore and offshore. Most relinquished. Production is expected from the Buzurgan field.

OWNERSHIP:
ERAP 60%
Sumitomo, Mitsubishi, Idemitsu and other Japanese interests 40%

PETROBRAS

SERVICE CONTRACT: Signed 1973. Area of 3,050 sq. km. Exploration obligation $12 million. Exploration in progress.

OWNERSHIP:
Petrobras 100%

INDIAN OIL AND NATURAL GAS COMMISSION

SERVICE CONTRACT: Signed 1973. Onshore acreage near Neutral Zone. Exploration in progress.

OWNERSHIP:
Oil and Natural Gas Commission of India . . 100%

BASRAH PETROLEUM COMPANY (BPC)

PARTNERSHIP: Originally a concession of seventy-five years from 1938, expiring 2013. Confined to producing areas west of Basra since expropriation measures of 1961. The Iraqi Government did not take a share in BPC as a result of the 1972 Participation Agreement—rejecting an initial 25 per cent holding as inadequate. During the October War of 1973 the State nationalized the holdings of the Near East Development Corporation (Exxon and Mobil), as well as 60 per cent of Shell's holding (that part relating to the company's Dutch registration). The expropriation of the Partex share followed. These expropriations are not officially accepted by BPC, which is a London registered company with shares still distributed between BP, Shell, CFP and the Near East Development Corporation with 23¾ per cent each, and Partex with 5 per cent. For practical purposes the ownership of the BPC concession is now as listed below.

PRODUCTION (1974): 878,000 b/d.

OWNERSHIP:
British Petroleum 23¾%
Royal Dutch/Shell 9½%
Compagnie Française des Pétroles (CFP) . . 23¾%
Iraq Government 43%

Kuwait

KUWAIT OIL COMPANY (KOC)

Production operations: In March 1975 it was announced that Kuwait had taken a 100 per cent of the assets of KOC, which had originally been owned by Gulf and BP. The original concession covered all of Kuwait including territorial waters to a six-mile limit, though areas totalling 11,414 sq. km. were relinquished in 1962, 1967 and 1971. The concession was signed in 1934 for seventy-five years, and was extended in 1951 to expire in 2026. The Kuwait National Assembly rejected the first participation agreement (for a 25 per cent state share) in 1973. The state took a 60 per cent stake in 1974. The details of the 100 per cent take-over in March 1975 were left to be settled by negotiation.

PRODUCTION (1974): 2.276 million b/d.

KUWAIT SHELL PETROLEUM DEVELOPMENT

CONCESSION: Forty-five years from 1961. Area of 1,500 sq. miles offshore. Drilling began in 1962, but was abandoned in the following year as a result of a still unresolved boundary dispute.

OWNERSHIP:
Royal Dutch/Shell 100%

KUWAIT SPANISH PETROLEUM COMPANY

PARTNERSHIP: Signed 1968. Thirty-five years with the option of a five-year extension. Area of 9,270 sq. km. on relinquished KOC acreage including some territorial waters. Drilling revealed shows of oil, but not commercial possibilities, and has been suspended since 1973.

OWNERSHIP:
Kuwait National Petroleum Company . . 51%
Hispanoil 49%

Partitioned Zone

AMERICAN INDEPENDENT OIL COMPANY (AMINOIL)

PARTNERSHIP: Originally a concession of sixty years from 1948, expiring in 2008. All of Kuwait's half of the Partitioned Zone, including territorial waters and islands. Agreement on 25 per cent state participation was ratified in 1973.

PRODUCTION (1974): 82,000 b/d.

OWNERSHIP:
R. J. Reynolds Industries 75%
Kuwait Government 25%

GETTY OIL COMPANY

PARTNERSHIP: Originally a concession of sixty years from 1949, expiring in 2009. All of Saudi Arabia's half of the Partitioned Zone including territorial waters and islands. Agreement on 25 per cent participation was ratified in 1973.

PRODUCTION: (1974): 82,000 b/d.

OWNERSHIP:

Getty	75%
Saudi Arabian Government	25%

ARABIAN OIL COMPANY (AOC)

PARTNERSHIP: All areas offshore the Partitioned Zone outside the six-mile limit. Under original terms, signed in 1957, the Saudi Arabian and Kuwaiti governments were given a stake of 10 per cent each. This was increased to 12½ per cent each in 1973. Revenues are shared equally between Saudi Arabia and Kuwait.

PRODUCTION (1974): 381,000 b/d.

OWNERSHIP:

Japan Petroleum Trading Company	75%
Kuwait Government	12½%
Saudi Arabian Government	12½%

Saudi Arabia

ARABIAN AMERICAN OIL COMPANY (ARAMCO)

PARTNERSHIP: Originally two concessions of sixty-six years from 1933 and sixty-six years from 1939, expiring in 1999 and 2005. Covering most of Eastern Province and other onshore and offshore areas. In 1973 Saudi Arabia took a 25 per cent participation, and in 1974, as an interim measure pending the negotiation of a 100 per cent take-over, a 60 per cent stake.

PRODUCTION (1974): 8.211 million b/d.

OWNERSHIP:

Saudi Arabian Government	60%
Exxon	12%
Standard Oil of California	12%
Texaco	12%
Mobil	4%

TENNECO

PARTNERSHIP: Signed 1965. Three areas totalling 26,000 sq. km. onshore and offshore along Red Sea Coast. Gas has already been struck in the northern Red Sea and exploration is continuing.

OWNERSHIP:

Petromin (Saudi state company)	10%
Tenneco	90%

Bahrain

BAHRAIN PETROLEUM COMPANY (BAPCO)

PARTNERSHIP: Originally a concession of ninety-five years from 1929, expiring 2024. All onshore areas, territorial waters and islands. Areas relinquished. In 1973 the Government took a 25 per cent participation, which was increased to 60 per cent in 1974.

PRODUCTION (1974): 67,000 b/d.

OWNERSHIP:

Bahrain Government	60%
Caltex (Texaco & Socal 50–50)	40%

SUPERIOR OIL COMPANY BAHRAIN

CONCESSION: Signed 1970. Thirty-five years. Area 1,307 sq. miles offshore relinquished by BAPCO. Exploration in progress.

OWNERSHIP:

Superior Oil	100%

Qatar

QATAR PETROLEUM COMPANY (QPC)

PARTNERSHIP: Originally a concession of seventy-five years from 1935, expiring in 2010. Onshore Qatar territory excluding large areas relinquished in the north and east. In 1973 the Government took a 25 per cent share in the operation, and in 1974 a 60 per cent share.

PRODUCTION (1974): 223,000 b/d.

OWNERSHIP:

Qatar Government	60%
Qatar Petroleum Company	40%
British Petroleum	9½%
Royal Dutch/Shell	9½%
Compagnie Française des Pétroles (CFP)	9½%
Near East Development Corpn. (Exxon & Mobil)	9½%
Participations and Explorations Corpn. (Gulbenkian)	2%

SHELL QATAR

PARTNERSHIP: Originally a concession of seventy-five years from 1952, expiring 2027. Offshore north-east of Qatar peninsula. In 1973 the government took a 25 per cent stake in the operation, and in 1974 a 60 per cent stake.

PRODUCTION (1974): 295,000 b/d.

OWNERSHIP:

Qatar Government	60%
Royal Dutch/Shell	40%

Qatar/Abu Dhabi

AL BUNDUQ COMPANY

CONCESSION: Granted in 1970 to develop the offshore al Bunduq field, on the median line between Qatar and Abu Dhabi. Revenues to be divided equally between Abu Dhabi and Qatar. Expected on stream August 1975.

OWNERSHIP:

British Petroleum	33⅓%
Compagnie Française des Pétroles (CFP)	33⅓%
Japanese group: ADOCO, Fuji, Kansai, Kansai Electric Power, Tokyo Electric Power, North Slope Oil, Alaska Oil	33⅓%

Abu Dhabi

ABU DHABI PETROLEUM COMPANY (ADPC)

PARTNERSHIP: Originally a concession of seventy-five years from 1939, expiring 2014. Includes onshore acreage and a three-mile belt of territorial waters, minus areas relinquished. In 1973 the Government took a 25 per cent share in the operation, and in 1974 negotiated 60 per cent participation.

GENERAL SURVEY

PRODUCTION (1974): 920,000 b/d.

OWNERSHIP:

Abu Dhabi Government	60%
Abu Dhabi Petroleum Company	40%
British Petroleum	9½%
Royal Dutch/Shell	9½%
Compagnie Française des Pétroles (CFP)	9½%
Near East Development Corpn. (Exxon & Mobil)	9½%
Participations and Explorations Corpn. (Gulbenkian)	2%

ABU DHABI MARINE AREAS (ADMA)

PARTNERSHIP: Originally a concession held by BP (two-thirds) and CFP (one-third) running from 1953 to 2018, and covering areas of the continental shelf beyond the three-mile limit. In December 1972 BP sold part of its stake to a large group of Japanese industrial companies (OPC). In 1973 the government took a 25 per cent stake, and in 1974 negotiated a 60 per cent participation.

PRODUCTION (1974): 362,000 b/d.

OWNERSHIP:

Abu Dhabi Government	60%
British Petroleum	14⅔%
Compagnie Française des Pétroles	13⅓%
Overseas Petroleum Corporation (OPC)	12%

ABU DHABI OIL COMPANY (ADOCO)

CONCESSION: Forty-five years from 1967 to 2011. Two offshore areas totalling 4,416 sq. km. relinquished by ADMA. A government participation option was written into the agreement. The company's first field, Mubarraz, was brought on stream in May 1973 at a rate of 20,000 b/d.

PRODUCTION (1974): 14,000 b/d.

OWNERSHIP:

Maruzen	33⅓%
Daikyo	33⅓%
Nippon Mining	33⅓%

ABU AL BU KOOSH GROUP

CONCESSION: Company formed in December 1972 to operate a small portion of LAPCO's Iranian field, Sassan, which extends into Abu Dhabi waters, where it is known as Abu al Bu Koosh. Oil on stream June 1974 at 45,000 b/d.

OWNERSHIP:

Compagnie Française des Pétroles	51%
New England Petroleum (Nepco)	24½%
Sunningdale	12½%
Amerada Hess	12½%

MIDDLE EAST OIL COMPANY (MEOC)

CONCESSION: Granted in 1966. Two areas relinquished by ADPC onshore totalling 15,566 sq. km. Exploration in progress.

OWNERSHIP:

Mitsubishi	100%

PHILLIPS/AGIP

CONCESSION: Granted in 1965. Three areas relinquished by ADPC onshore totalling 9,000 sq. km. Exploration in progress.

OWNERSHIP:

Phillips	41⅔%
AGIP S.p.A.	41⅔%
Aminoil (R. J. Reynolds)	16⅔%

AMERADA GROUP

CONCESSION: Two offshore blocks relinquished by ADMA totalling 3,150 sq. km. Exploration in progress.

OWNERSHIP:

Amerada Hess	31½%
Pan Ocean	31½%
Bow Valley Industries	20%
Wington Enterprises	17%

SUNNINGDALE

CONCESSION: Two offshore blocks covering 2,820 sq. km. relinquished by ADMA. Term: eight years for exploration and thirty years for production. Government has a participation offer of 51 per cent. Exploration in progress.

OWNERSHIP:

Sunningdale	100%

Dubai

DUBAI PETROLEUM COMPANY (DPC)

CONCESSION: Sixty years from 1952, expiring 2012. Continental shelf area beyond the three-mile limit. The ownership of the concession, originally held by BP and CFP as Dubai Marine Areas, has changed several times. Under arrangements existing in 1973–75 the concession is held by the companies listed below, with DPC, a wholly owned subsidiary of Conoco, as operator.

PRODUCTION (1974): 242,000 b/d.

OWNERSHIP:

Continental (Conoco)	30%
Deutsche Erdol (Texaco)	10%
Compagnie Française des Pétroles	25%
Hispanoil	25%
Sun	5%
Wintershall	5%

TEXAS GROUP

CONCESSION: Granted 1974 for onshore and offshore areas totalling 1.5 million acres. Exploration in progress.

OWNERSHIP:

Texas Pacific	50%
Union Texas	25%
Louisiana Land and Exploration	10%
Quintana	7½%
Natomas	7½%

Sharjah

BUTTES GROUP

CONCESSION: All Gulf coast offshore areas including islands and territorial waters awarded in 1969. Production began in 1974 from a structure within the twelve-mile territorial waters of the island of Abu Musa. Until Sharjah extended its limit this far in 1970, the structure had been outside Abu Musa waters and within the offshore concessions granted by Umm al Qaiwain to Occidental. In December 1971, Iran occupied half the island and announced an agreement with Sharjah whereby Abu Musa came under joint sovereignty. Revenues from the field are now shared equally. Subsequently Sharjah agreed that Umm al Qaiwain should receive 30 per cent of its half share. The Abu Musa

field came on stream in August 1974, and up to December production averaged 50,000 b/d.

OWNERSHIP:

Buttes Oil and Gas	25%
Ashland Oil	25%
Skelly Oil	25%
Kerr-McGee	12½%
Cities Service	10%
Juniper Petroleum	2½%

CRYSTAL GROUP

CONCESSION: Granted 1974, for 2,200 sq. km. onshore. Exploration in progress.

OWNERSHIP:

Crystal Oil	65%
Norsk Hydro	30%
Parisbas Associates	5%

RESERVE OIL

CONCESSION: Granted 1974. Area of 1,500 sq. km. in the Gulf of Oman off Sharjah's east coast. Expenditure obligation $1 million over two years. Exploration in progress.

OWNERSHIP:

Reserve Oil and Gas	100%

Ajman

UNITED REFINING

CONCESSION: Signed 1974. Thirty-five years. Area of 600 sq. km. representing entire onshore and offshore acreage, formerly held by Occidental. In 1975 Asamera took 25 per cent. Exploration in progress.

OWNERSHIP:

United Refining	75%
Asamera	25%

Umm Al Qaiwain

UNITED REFINING

CONCESSION: Signed 1974 for 1,920 sq. km. offshore areas formerly held by Occidental. Exploration in progress.

OWNERSHIP:

United Refining	30%
Asamera	20%
Canadian Superior	25%
Kewanee	10%
Zapata	15%

Ras Al Khaimah

CRYSTAL GROUP

CONCESSION: Originally held by Union Oil of California, which made a non-commercial discovery in deep water offshore, and in 1973 gave up both onshore and offshore rights. Onshore rights of 2,000 sq. km. went to Peninsula Petroleum, which, in 1974, transferred concession to Crystal group. Exploration in progress.

OWNERSHIP:

Crystal Oil	65%
Norsk Hydro	35%

VITOL GROUP

CONCESSION: Originally held by Unocal (*see* above), which, in 1973, gave up its offshore rights to Vitol Exploration of Holland. In 1974 Vitol transferred half of its interest to Weeks Associates. In 1975 a group of European, U.S. and Canadian companies took half of the interests of both Vitol and Weeks. The companies were planning to start drilling in 1975.

OWNERSHIP:

Vitol Exploration	25%
Weeks Associates	25%
European, U.S. Canadian group: SIR, Deutsche Schachtbau, United Refining, Canadian Superior, Asamera, Kewanee	50%

Fujairah

RESERVE OIL

CONCESSION: Signed in 1974 for offshore area totalling 2,300 sq. km. in Gulf of Oman. Expenditure guarantee $1 million over two years. Exploration in progress.

OWNERSHIP:

Reserve Oil and Gas	100%

Oman

PETROLEUM DEVELOPMENT OMAN (PDO)

PARTNERSHIP: Originally a concession of seventy-five years from 1937, expiring 2012. Onshore areas, originally covering northern provinces, now including Dhofar. Government took a 25 per cent share in 1973, and increased this to 60 per cent in 1974.

PRODUCTION (1974): 295,000 b/d.

OWNERSHIP:

Oman Government	60%
Royal Dutch/Shell	34%
Compagnie Française des Pétroles	4%
Participations and Explorations Corpn. (Gulbenkian)	2%

SUN OIL

CONCESSION: Offshore areas of 13,000 sq. km. south of Masirah Island. Awarded to a group composed of Sun Oil, Home Oil of Canada, Canadian Industrial Gas and Oil, Deutsche Schachtbau. Sun Oil is the operator. Area awarded was part of a larger offshore concession awarded to Wendell Phillips and later revoked by the Oman Government in 1971. Exploration in progress.

ELF/SUMITOMO

CONCESSION: Signed 1975 for onshore area of 7,000 sq. km. in Butabul region. Exploration in progress.

OWNERSHIP:

Elf (France)	50%
Sumitomo	50%

Oil Groups Producing and Exploring in North Africa and Syria

Algeria

SONATRACH

With the 51 per cent nationalization of French oil companies in February 1971, Sonatrach, the state oil concern, took full control of the bulk of the country's production, as well as ownership of all pipelines and the country's natural gas production. Sonatrach is responsible for the operation of the Gassi Touil, Rhourde el Baguel, Zarzaitine, Edjeleh and Tinfouye fields amongst others.

COMPAGNIE FRANÇAISE DES PÉTROLES

Total Algérie, CFP's affiliate, operates the Hassi Messaoud North field as 49 per cent minority partner with Sonatrach in Société Algérienne d'Exploration Petrolière (ALREP), in accordance with the nationalization settlement reached in 1971.

ELF-ERAP

Elf-ERAP, the French state oil corporation, as the 49 per cent minority partner of Sonatrach, operates the Hassi Messaoud South field.

GETTY OIL

Alone of the U.S. companies operating in Algeria, which were nationalized in 1967, Getty has been allowed to maintain its interests—5.6 per cent of the Rhourde el Baguel and Messdar fields. It also joined a new exploration venture as a minority partner, on a 49–51 per cent basis, in 1968—but this was abandoned in 1973 after the company had failed to find oil.

Since the beginning of 1973 Algeria has concluded a number of joint exploration agreements with foreign partners on a 51–49 per cent basis for limited periods. Under the pattern established the foreign partners undertake to bear the whole cost of exploration as well as, in several cases, making payments for geophysical work already carried out by Sonatrach. The state company will repay 51 per cent of costs in cash or kind in the event of production. Partners' offtake is subject to standard fiscal obligations.

Sun Oil: Under agreement of March 1973 the company is to explore 4,100 sq. km. in the Ouargla region and 5,375 sq. km. in the Grand Erg Oriental (south of the el Borma field). Sun Oil paid Sonatrach $14 million for work already carried out, and undertook a total exploration commitment of $17.5 million.

Compagnie Française des Pétroles: Under agreement of June 1973 the company is to explore four blocks covering some 12,700 sq. km. Two are in the Ouargla area, and two are south of the Erg Oriental. A minimum exploration expenditure commitment was set at $33.5 million. A subsequent agreement covered the exploration of offshore waters.

Hispanoil: Under agreement of July 1973 Hispanoil is to explore three blocks totalling 10,200 sq. km., two in the Ouargla region and one in the Touggourt region for periods of three and four years respectively. Oil has been discovered in one of these blocks. The company paid Sonatrach $6.5 million for work already carried out, and undertook a minimum expenditure of $18.5 million.

Kopex: Under agreement of October 1973 the Polish state concern undertook to spend $32 million exploring an area of 8,500 sq. km.

Deminex: Under agreement of November 1973 the German group undertook to explore six blocks totalling 28,500 sq. km. over a two to four-year period, with a minimum spending commitment of $103 million and with production sharing in the event of a commercial discovery to last twelve years. Under a subsequent agreement of January 1974 Deminex committed another minimum of $60 million exploring four blocks covering 19,700 sq. km. in the Eastern Sahara.

Elf-ERAP: Under agreement of January 1974 the French state concern undertook to explore three blocks covering an area of 8,450 sq. km. spending a minimum of $31 million. This is in addition to the exploration acreage of 4,325 sq. km. involved in the December 1971 settlement with the Algerian Government.

Standard Oil of Indiana (AMOCO): Under agreement of 1974 the American independent undertook to explore an area of 6,562 sq. km. in the Illizi region south-east of the Hassi Messaoud field, with a minimum spending commitment of $33.5 million.

Tunisia

SOCIÉTÉ ITALO-TUNISIENNE EXPLOITATION PETROLIÈRE

A fifty-fifty partnership between the state and AGIP, the affiliate of the Italian state concern ENI. Oil has been on stream from the El Borma field on the Algerian border since 1966.

PRODUCTION (1974): 40,000 b/d (est.).

AQUITAINE-SEREPT

A seventy-thirty partnership between Aquitaine and SEREPT—Société de Recherches et d'exploitation des Pétroles en Tunisie (56.93% ERAP, 23.87% Tunisian Government, 10.94% CFP, 5.49% REPFRANCE, 2.77% COFIREP). The group operates two small onshore fields, El Doulcb and Tamesmida, which were brought on stream in 1968.

PRODUCTION (1974): 9,500 b/d (est.).

COMPAGNIE FRANÇAISE DES PÉTROLES

A fifty-fifty partnership between the state and CFP. Operates the small onshore field, Sidi Litayem which was put into production in 1972.

PRODUCTION (1974): 4,000 b/d (est.).

AQUITAINE—ELF-ERAP

A fifty-fifty partnership between the state and Aquitaine-Elf-ERAP. Production from the Ahstart field off the Gulf of Gabes near the Kerkenna Isles since December 1973.

PRODUCTION (1974): 30,000 b/d (est.).

AGIP-SHELL

Partnership between AGIP, Shell, Amoco (Standard of Indiana), and Total (CFP). Discovered Isis field offshore. Expected on stream in 1976.

Other exploration licences, announced in the past two years, have been awarded to: Shell, Santa Fe, Gulf, A. P. Moeller (Danish), Buttes, Conoco, Panocean-Sunningdale and Bow Valley.

Egypt

AL NASR OILFIELDS

Owned by the Egyptian General Petroleum Corpn. (EGPC). Area of Sinai adjacent to the northern end of the Gulf of Suez. The company operated a group of fields until the 1967 operation by the Israelis, who concentrated their efforts on the Abu Rudais field of COPE (*see* below). Formerly Anglo-Egyptian Oilfields, in which BP and Shell had a 39 per cent holding until their nationalization in 1964.

COMPAGNIE ORIENTALE DES PÉTROLES D'EGYPT (COPE)

Partnership of EGPC and International Egyptian Oil Company (91.73% ENI) on fifty-fifty basis. Area of Sinai coast towards southern end of Gulf of Suez. The company was responsible for operating the fields onshore and offshore. Since 1967 Abu Rudais has been exploited by Israel.

GULF PETROLEUM COMPANY

Fifty-fifty partnership between EGPC and Amoco (Standard of Indiana). Area offshore south-east of Suez. Original exploration permit granted in 1964 for thirty-year concession. Production mainly from El Morgan field.

FAGHUR PETROLEUM COMPANY

Fifty-fifty partnership between EGPC and Amoco. Areas of the Western Desert in the Agila and Rayoum regions. Exploration permit originally granted in 1963 over 6,500 sq. km. territory. Abu Gharadiq and Razzak fields.

WESTERN DESERT PETROLEUM OPERATING COMPANY (WEPCO)

Partnership between EGPC with 50 per cent, Phillips Petroleum with 35 per cent and Hispanoil with 15 per cent. Area of the Western Desert between the Nile and the Libyan border, including coastal waters. Production from El Alamein and Yidma fields.

GENERAL PETROLEUM CORPORATION

Owned by EGPC. Coastal area on the Western side of the Gulf of Suez. A number of small fields including Ras Gharib. In 1974 production from the July field was started at a rate of 30,000 b/d, and output from three smaller structures also began at 7,500 b/d.

DELTA PETROLEUM COMPANY (DELPCO)

Owned by EGPC (50%), International Egyptian Oil Company (25%) and Conoco (25%). Originally exploration over territory covering 24,000 sq. km. in Nile Delta. No oil discoveries, but natural gas has been found and is being exploited.

Since the spring of 1973 Egypt has concluded a number of joint exploration and production agreements with foreign oil companies. Under all but one of them, 40 per cent of output is set to repay the cost of production (though if the market proceeds from this proportion exceed production expenses in any one year the partner will repay the difference in cash). Thereafter production is to be split on an 80–20 or 75–25 basis in favour of the state. However, for most agreements the exact arrangements have not been revealed. Also involved are signature bonuses and exploration commitments from the partners, while EGPC is to bear all taxes and bonuses payable to the state.

Braspetro: 18,000 sq. km. in the Nile Delta, the Eastern Desert and the Western Desert. Exploration commitment by the Brazilian company $14.4 million over eight years. A 50–50 joint venture.

Transworld: 100 sq. km. in the Gulf of Suez offshore. Exploration commitment $5.6 million over four years. 80–20 production sharing.

Transworld International: 7,300 sq. km. in the Gulf of Suez offshore. Exploration commitment $9 million over six years.

Mobil: 6,500 sq. km. offshore the Nile Delta. Exploration commitment $23 million over eight years.

Mobil: 2,250 sq. km. in the Gulf of Suez offshore. Exploration commitment $21.5 million over eight years.

Mobil: 5,300 sq. km. in the Sallum area of the Western Desert. Exploration commitment $8.25 million. 80–20 production sharing.

Exxon: 15,000 sq. km. offshore the Nile Delta. Exploration commitment $50 million over twelve years.

Exxon: 12,000 sq. km. Red Sea. Exploration commitment $48 million over twelve years. 70/80–30/20 production sharing depending on water depth.

Deminex: 2,000 sq. km. in the Gulf of Suez. Exploration commitment $22 million over eight years. Production sharing 80–20.

Conoco: 8,500 sq. km. in the southern part of the Nile Delta. Exploration commitment $23 million over ten years.

Conoco-International Egyptian Oil Company (93% *ENI*)*:* 13,000 sq. km. offshore and the Nile Delta. Exploration commitment $20 million over eight years. Production sharing 75–25 onshore and 70–30 offshore.

Pexpach LVO Corpn.: 3,000 sq. km. in the Western Desert south-west of Cairo. Exploration commitment of $9 million over eight years. Production sharing 75–25 at the outset rising to 80–20 if production rises above 125,000 b/d.

Chevron (*Standard Oil of California*)*:* 7,000 sq. km. in the Western Desert, north of WEPCO's El Alamein field. Exploration commitment $17 million.

Atlantic Richfield: acreage in the Mersa Matruh area along the Mediterranean in the Western Desert. Exploration commitment $17 million.

Shell: 15,000 sq. km. in the Western Desert. Expenditure commitment $35.5 million over four years.

Shell-British Petroleum-Deminex: 1,500 sq. km. offshore in the north-east of the Gulf of Suez. Expenditure commitment of $12 million over three years.

Amoco: 100 sq. km. of offshore acreage in the Gulf of Suez north of the Ras Ghareb field.

Amoco: 600 sq. km. in the Gulf of Suez. Expenditure commitment $20.5 million over seven and a half years. Production sharing 85–15.

Amoco: 1,350 sq. km. in the Gulf of Suez. Exploration commitment $29 million over seven and a half years.

Union Oil of California: 3,850 sq. km. in the Benas area along the Red Sea coast. Expenditure commitment $30 million over ten years.

Petroswede: 4,000 sq. km. in the Natrun area of the Western Desert. Exploration commitment $10.5 million over eight years. Production sharing 80–20.

Phillips-Hispanoil: 12,000 sq. km. in the Red Sea and the Quseir region onshore. Exploration commitment $45 million over seven to nine years. Production sharing 80–20.

Santa Fe: 4,500 sq. km. east of Cairo. Exploration commitment $18 million over seven years. Production sharing 80–20.

Epedeco: 527 sq. km. west coast Gulf of Suez, near Bakr field. Exploration commitment $15 million over six years. Production sharing 85–15 rising to 87.5–12.5 if production exceeds 50,000 b/d.

Elf-ERAP: 2,200 sq. km. offshore Alexandria. Exploration commitment $28 million over six years. Production sharing 85–15/75–25.

Libya

ESSO STANDARD LIBYA

AREA: Original territory included nine concessions granted in 1955 and 1956 covering 52,000 sq. km., now reduced by relinquishments. Most production comes from the Zelten field from which the 172 km. pipeline runs to the Mersa el Brega terminal on the Gulf of Sirte. Esso accepted the Government's 51 per cent nationalization in the spring of 1974.

PRODUCTION (1974): 183,000 b/d.

OWNERSHIP:

Libyan Government	51%
Exxon	49%

OASIS OIL COMPANY

AREA: Original territory included twelve concession areas granted in 1955 and 1956 covering 150,000 sq. km. subsequently reduced by relinquishments. Production comes from the Dhara, Defa, Bahi, Waha, Samah and Zaggut fields connected to the terminal at Es Sidr. Original concessions held by Continental, Marathon and Amerada Hess, which sold half its share to Shell. The three U.S. independents accepted Libya's 51 per cent nationalization, but Shell did not—losing its stake by nationalization in March 1974.

PRODUCTION (1974): 550,000 b/d.

OWNERSHIP:

Libyan Government	59¼%
Continental	16¼%
Marathon	16¼%
Amerada Hess	8¼%

OCCIDENTAL PETROLEUM

AREA: The Sirte Basin where the company made discoveries in concessions, granted in 1966, which had previously been relinquished by another company. Fields are connected to the Zuetina terminal by a 217 km. pipeline.

PRODUCTION (1974): 321,000 b/d.

OWNERSHIP:

Libyan Government	51%
Occidental	49%

ARABIAN GULF EXPLORATION COMPANY

AREA: South-east Cyrenaica deep in the desert. Production from the Sarir field (the biggest in Libya) which was discovered and developed by the Bunker Hunt-British Petroleum fifty-fifty partnership in a concession granted in 1957. The BP interest was nationalized in December 1971 and Bunker Hunt in June 1973. The Sarir field, whose crude has a remarkably high wax content and is difficult to produce, is now run by AGEC, a subsidiary of the National Oil Company.

PRODUCTION (1974): 87,000 b/d. (1973): 248,000 b/d).

OWNERSHIP:

Libyan Government	100%

AMERICAN OVERSEAS PETROLEUM COMPANY (AMOSEAS)

AREA: Nine concessions granted in 1956, 1959 and 1966 totalling 60,000 sq. km., subsequently reduced by relinquishments. The Beda and Nafoora fields connect separately with the Mobil pipeline systems which have their terminal at Ras Lanuf. The owners of Amoseas, Texaco and Standard Oil of California, were nationalized in February 1974 following their refusal to accept the Government's 51 per cent take-over measure. Fields now run by NOC.

PRODUCTION (1974): 93,000 b/d.

OWNERSHIP:

Libyan Government	100%

AGIP-NOC

AREA: Eastern Cyrenaica towards the Egyptian border. Fifty-fifty partnership between AGIP and the state dating from 1969. Production from the Abu Tiffel field is pumped through a 110 km. spur line to the Occidental system.

PRODUCTION (1974): 107,000 b/d.

OWNERSHIP:

Libyan Government	50%
AGIP	50%

MOBIL-GELSENBERG

AREA: Eleven concessions granted in 1956 and 1957 totalling 47,000 sq. km. Production mainly from the Hofra field, which is linked by a 138 km. pipeline to the Ras Lanuf terminal. A second pipeline carries the oil of the Amal field to the same outlet. Gelsenberg agreed to a 51 per cent state take-over in September 1973, and Mobil in April 1974.

PRODUCTION (1974): 104,000 b/d.

OWNERSHIP:

Libyan Government	51%
Mobil	31 17/20%
Gelsenberg	17 3/20%

ESSO SIRTE

AREA: Two concession areas in Sirte basin granted in 1955. Production is from the Raguba field, which is connected to Esso's pipeline to Mersa el Brega by a 90 km. spur. Atlantic Richfield's stake in the operation was nationalized in February 1974 because of its refusal to accept the government's 51 per cent take-over.

PRODUCTION (1974): 27,000 b/d.

OWNERSHIP:

Libyan Government	63%
Exxon	24½%
W. R. Grace	12½%

AQUITAINE GROUP

AREA: Four concessions granted in 1968, one neighbouring the Sorite Basin and three in Western Libya. The field is operated by Aquitaine, an affiliate of CFP.

PRODUCTION (1974): 9,000 b/d.

OWNERSHIP:

Aquitaine	28%
Hispanoil	42%
Murphy Oil	12%
Elf-ERAP	14%

AMOCO LIBYA

AREA: Originally six areas totalling 76,000 sq. km., now reduced by relinquishments to four areas totalling 2,000 sq. km.

PRODUCTION (1974): 5,500 b/d.

OWNERSHIP:

Amoco (Standard Oil of Indiana) . . . 100%

Having established the principle of 51 per cent majority participation, the Libyan Government in 1974 began entering into production sharing agreements with foreign concerns, which have set the pattern for joint ventures in the future with the National Oil Company, which holds all acreage relinquished from the original concessions of the 1950s and 1960s. Under the production sharing agreements the foreign companies undertake expenditure commitments over a set period for exploration—the cost of which they bear in full. In the event of commercial discoveries output is to be split 85–15 or 81–19 in favour of the state. The government is to provide the funds for development, which the partner repays on easy terms. The latter will not be liable to taxation on their share of the agreement.

NOC-Occidental: Nineteen blocks covering 49,000 sq. km. in the Sirte basin, the Jebel Akhdar, east of Benghazi, and the Fezzan district in the south-west of the country. Expenditure commitment $90 million over five years. Production sharing 81–19.

NOC-AGIP: Two offshore blocks totalling 44,000 sq. km., one of which is west of Tripoli bordering Tunisian waters; and two onshore blocks of 100,000 sq. km. in the west of the country—one in the Sirte basin and the other in the Kufra area. Expenditure commitment $70 million over five years. Production sharing 85–15.

NOC-Mobil: Area of 30,000 sq. km. including six onshore blocks in the Sirte basin and one onshore in the Gadames basin, as well as one deep-water offshore area in the west and another offshore area in the east. Expenditure commitment $70 million over six years. Production sharing 85–15 offshore, and 81–19 onshore.

NOC-Exxon: Unspecified acreage onshore and offshore. Expenditure commitment $90 million over five years. Production sharing 85–15 offshore, and 81–19 onshore.

NOC-CFP: Areas and production split unspecified. Expenditure commitment $90 million over five years.

NOC-Aquitaine-Elf: Agreement changed arrangements with affiliates of CFP and ERAP for one block offshore granted in 1968 on old style concessionary terms, and three others in east and central Libya granted in the same year on a joint venture basis. Expenditure commitment $45 million. The French companies have also undertaken to put into operation two fields hitherto considered uncommercial.

NOC-Petrobras: Two areas totalling 30,000 sq. km. in the Sirte basin and the Marzuq basin. Expenditure commitment $35 million over five years. Production sharing 85–15. If no oil is found within five years, Petrobras, under a thirty-year agreement, has the right to negotiate another area.

Syria

From 1964 to 1975 all oil rights were vested exclusively in the hands of government agencies under the overall control of the General Petroleum Authority. The main oil fields are at Suweidiya, Rumelan and Karatchuk in the extreme north-east of the country, where the aim is to increase production to 300,000 b/d in 1975. The GPA has been assisted by foreign expertise under contract. Following the nationalization of the Iraq Petroleum Company in 1972, Syria took over the company's installations in the country—in particular the pipeline to the Mediterranean. Transit dues were subsequently negotiated with Iraq. In 1975, in a major reversal of its previous policy, the government decided that it would in future allow in foreign companies on a production sharing basis, similar to that applied by Egypt and Libya.

Tripco Petroleum: Under agreement of March 1975, 6,000 sq. km. of continental shelf. Production sharing 80–20 rising to 85–15 if production exceeds 200,000 b/d.

Lebanon

Soon after the conclusion of the Syria-Tripco agreement the Lebanese Government concluded a similar agreement with Tripco.

Tripco Petroleum: Under agreement of April 1975, offshore areas between Beirut and Syrian border. Production sharing 80–20, rising to 85–15 if production exceeds 200,000 b/d.

Appendix II

Statements by OPEC Officials

Middle East
Economic Digest

"SOLEMN DECLARATION" OF O.P.E.C. SUMMIT CONFERENCE

Issued 6 March 1975

The Kings and Presidents of the OPEC member countries convened in Algiers at the invitation of President of the Revolution Council and Prime Minister of the Democratic and Popular Republic of Algeria.

1. They discussed the current world economic crisis. They exchanged views on the causes of this crisis, which has been in progress for many years, and studied the measures to be taken to safeguard the rights and legitimate interests of their peoples within the framework of international solidarity and co-operation.

The Kings and Presidents affirm that international peace and progress depend on the mutual respect for their sovereignty of the member countries of the world community and on equality among them in accordance with the UN Charter. They also affirm that the basic statements embodied in this declaration are in line with the resolutions of the special sixth session of the UN General Assembly on the questions of raw materials and development.

The Kings and Presidents reaffirm the importance of an exchange of views among their countries to unite them in a bid to safeguard the rights and legitimate interests of their peoples and they once more proclaim their countries' right to develop their natural resources, to exploit them and fix their prices. The right is one of the rights of their sovereignty which brooks no argument. The Kings and Presidents reject any idea or attempt to infringe these basic rights – ideas and attempts which constitute a challenge to their countries' sovereignty.

They stress anew that OPEC member states work for the higher interest and progress of the entire world community, through a firm and cohesive collective defence of the legitimate rights of its peoples. They are thus promoting the interests of the raw material producing development countries in defence of their peoples' legitimate rights. They believe that the nations' joint responsibilities with regard to the international economic situation demand that more importance be attached to international co-operation.

They declare that they are prepared to contribute to the development and stability of the world's economy, as has been stated in the declaration and the special action programme to establish a new international economic system, a document approved by the UN General Assembly at its sixth special session.

Economic differences

2. The Kings and Presidents observe that the current international economic crisis is due basically to the great differences in the economic and social progress of the various peoples; that these differences, of which the backwardness of the developing countries is one feature, is basically the result of foreign exploitation, which perpetuates these differences. It has become more acute with the passing of time in the absence of adequate international co-operation for development. This situation has led to the accelerated exhaustion of the developing countries' natural resources, and this in itself hinders the effective transfer of capital and technology and greatly disturbs the balance of economic relations.

They point out that this disturbance which besets the current international economic situation has been aggravated through the widespread inflation. The latter has reduced economic growth in general and has contributed to the instability of the world monetary system in the absence of adequate controls.

They reaffirm that the reasons for this disturbance must be sought in the chronic and deep-seated defects which have been accumulating for years, such as the advanced countries' general tendency to over-consumption and waste of limited resources and to the inappropriate, short-sighted economic policies pursued by the industrialised world.

The Kings and Presidents reject all allegations which attribute the responsibility for the present instability in the world's economy to the price of oil. The fact is that oil, which has made a considerable contribution to the progress and prosperity of the industrialised countries in the last quarter of this century, is not only the cheapest energy source, but the cost of imported oil accounts for only a minute portion of the advanced countries' GNP. The latest adjustment in the price of oil has contributed only slightly to their high average inflation, which is basically due to other causes, whose roots are within the economies of the advanced countries.

This inflation, which is consistently being exported to the developing countries, has resulted in obstructing their efforts in the sphere of development.

Propaganda campaign

3. The Kings and Presidents also condemn the threats that have been made, the propaganda campaign and other measures taken, culminating in the accusation levelled at the OPEC member countries that they wish to undermine the economy of the developed countries. These campaigns and measures, which may lead to a confrontation, have precluded a clear understanding of the existing problems, and have created an atmosphere of tension hardly conducive to consultations or co-operation in the international sphere. They denounce any attempts by the consuming countries to form cartels with a view to a confrontation; they condemn any plan of strategy aimed at economic or military acts of aggression by these or other cartels against any member countries of OPEC.

In view of these threats, the Kings and Presidents once more emphasise the solidarity which unites their peoples in defence of their peoples' legitimate rights. They declare their readiness, within the framework of that solidarity, to take immediate and effective measures to oppose these threats by adopting a united policy whenever this is called for, particularly in the event of aggression.

4. While the Kings and Presidents are careful to respond to the legitimate aspirations of their peoples for development and progress, they are fully aware of the close links that exist between the national development of their respective countries and the economic prosperity of the world as a whole. The increasing co-operation between nations has made the Kings and Presidents more aware of the difficulties which other peoples have had to face and which may affect world stability. In view of this, they once more emphasise their support for dialogue, co-operation and joint action for finding solutions to the major problems facing the world's economy.

Prompted by this spirit, the OPEC member countries, thanks to the increasing financial resources which have been accruing to them for a relatively short period, have contributed – both through bilateral and multilateral arrangements – to the efforts made for development and for stabilising the balance of payments of other developing countries as well as the industrially advanced states. The financial aid given by these countries to other developing countries during 1974 was, in proportion to their GNP many times the volume of the annual average of the assistance given by the industrially advanced countries to the developing countries in the last development decade.

In addition to this, the OPEC member countries have offered credit facilities to the developed countries to help them meet their balance of payment deficit. Furthermore, the measures taken by the OPEC member countries to speed up their economic development and encourage trade among themselves have contributed to the expansion of international trade and to establishing an equilibrium in the balance of payments of the developed countries.

Oil vital for development

5. The Kings and Presidents agree in principle to the holding of an international conference between the developing and the advanced countries. They believe that the aim of such a conference should be to make concrete progress towards alleviating the existing major difficulties in the world's economy. That conference should therefore pay equal attention to the problems facing the advanced and the developing countries. Consequently, the agenda of that conference should under no circumstances be confined to a study of the problem of energy: it should clearly cover the questions of the raw materials of the developing countries; reform of the international monetary system, and co-operation for development, with a view to achieving world stability.

Furthermore, the conference could take place on a limited scale so that it can work efficiently, provided that all countries concerned with the problems under discussion are suitably and genuinely represented.

6. The Kings and Presidents emphasise that the exploitation of the oil resources of their respective countries – which are liable to run out – should be so conducted as to serve primarily and above all the interests of their peoples in the best possible manner, proceeding from the fact that oil, which represents the major source of their income, is a factor vital for the development of their countries.

While they realise the crucial role which oil supplies play in the world's economy, they believe that to conserve the resources of oil is a basic requirement for the prosperity of the generations to come. Consequently, they urge the pursuit of policies aimed at the optimum utilisation of this essential resource, which is both finite and non-renewable.

7. The Kings and Presidents point out that the artificially low prices of oil have in the past led to continuous exploitation of this limited and exhaustible resource. To persevere with that policy would lead to disaster, both as regards the conservation of this resource and for the world's economy. They are of the opinion that the interests of the OPEC member countries, as well as those of the rest of the world, require that the price of oil, being the basic source of national income of the member countries, should be determined by taking into consideration the following:

(a) The need to conserve oil, the fact that it is a finite resource and its increasing rarity in the future;

(b) The value of oil, having regard to its utilisation for other than energy purposes;

(c) The facts with regard to alternative energy sources, from the point of view of their availability, use and cost.

The price of oil should, moreover, be stabilised by linking it with certain objective criteria, including the price of industrial products, the rate of inflation, and the conditions of transfer of commodities and technology for the development of the OPEC member countries.

8. The Kings and Presidents declare that their countries are ready to continue to offer positive facilities for the solution of the major problems affecting the world's economy, and to encourage the consistent co-operation, which is the key to the establishment of a new international economic system. They propose, with a view to advancing this international co-operation, that a number of measures should be taken vis-a-vis the other developing and the industrialised countries. In this context, they would like to emphasise that the measures proposed in this declaration constitute a comprehensive programme whose provisions must be implemented in full if the goals of justice and efficiency are to be achieved.

Aid to developing countries

9. Once again the Kings and Presidents stress the natural solidarity which unites their countries with the other developing countries in their struggle to overcome their backwardness. They express their deep appreciation of the strong support given by all the developing countries to the member countries of OPEC at the developing countries' conference on raw materials held in Dakar from 3rd to 8th February 1975. They realise that the developing countries suffer worst from the world economic crisis. Consequently they stress anew their determination to implement measures to strengthen their co-operation with these countries. They are also prepared to participate within the limit of their resources, in implementing the special international programme drawn up by the UN and to give additional special allocations, loans and grants to the developing countries. In this connection they have agreed to co-ordinate their special programme for financial co-operation to aid the worst-hit developing countries in the best possible manner, especially to help them overcome their balance-of-payments difficulties. They have also agreed to co-ordinate these financial measures with long-term loans for the development of the economies of these countries.

To help improve the use of the agricultural potentials of the developing countries, the Kings and Presidents have decided to encourage the production of fertilisers and to provide the latter at favourable terms to the countries which have been badly affected by the economic crisis. They stress their readiness to co-operate with the other raw material exporting developing countries in their efforts to obtain a fair price for their exports.

10. As a contribution to alleviating the difficulties affecting the economies of the advanced countries, the Kings and Presidents declare that the OPEC member countries will continue to make special efforts in respect of the needs of the advanced countries.

As for oil supplies, they reiterate their countries' readiness to guarantee sufficient supplies to meet the vital needs of the economies of the advanced countries, provided that the consumer countries do not erect artificial barriers to distort the natural functioning of the laws of supply and demand. In furtherance of this aim [of guaranteeing supplies], the OPEC member countries will establish close co-operation and co-ordination among themselves so as to preserve a balance between oil production and the needs of the world's market.

As to oil prices, the Kings and Presidents point out that despite the apparent huge increase in these prices, the high rate of inflation and the deterioration of the value of currency have wiped out a large part of the real value of the prices following their adjustment. The current price falls noticeably below that which would have resulted from the development of alternative sources of energy.

However, they are ready to discuss conditions for the stabilisation of oil prices – a matter which will help the consumer countries introduce the necessary changes in their economies.

The Kings and Heads of State, motivated by a spirit of dialogue and co-operation, stress that the OPEC member states are prepared to negotiate with the advanced countries which have suffered most, bilaterally or through international organisation, with a view to the provision of financial facilities that would enable the economies of these countries to develop while guaranteeing the value of the deposits of the OPEC member states as well as their co-operation.

UN programme of action

11. The Kings and Presidents, while maintaining that any genuine international co-operation must benefit all the developing and advanced countries alike, declare that in return for the efforts, guarantees and commitments that the OPEC member states are willing to undertake, the advanced countries must contribute to the progress and development of the developing countries by taking specific steps, particularly with a view to achieving economic and monetary stability and giving appropriate attention to the interests of the developing countries.

In this connection, they underline the need for the full implementation of the programme of action approved by the UN General Assembly at its sixth special session. Accordingly, they stress the following prerequisites:

(a) The advanced countries should support the measures adopted by the developing countries with the aim of stabilising the prices of their exports of raw materials and other essential commodities at fair and satisfactory levels.

(b) The advanced countries should honour their international commitments arising out of the second UN development decade as a minimum contribution which could be increased, in particular by the most advanced states, for the benefit of the developing states which have suffered most.

(c) To draw up and implement an effective food programme under which the advanced states, particularly the major food-producing and exporting states, will give grants and aid to the most needy developing states in relation to their foodstuff and agricultural requirements.

(d) To speed up operations to effect the development of developing states, particularly by using modern technology efficiently and quickly and by eliminating obstacles in the way of the application and development of technology in the service of the economy of of our countries.

In view of the fact that in several instances obstacles to development arise from the inadequate and unsuitable transmission of technology, the Kings and Presidents attach the greatest importance to the transmission of technology, which they regard as a big test of the degree of commitment on the part of the advanced countries to the principle of international co-operation in the interest of development.

The transmission of technology should not be based on a division of labour whereby the developing states would produce commodities of inferior technological standard. All efficient transmission of technology should help the developing countries to overcome the technological backwardness characterising their economies by means of manufacturing products of high technological standard themselves, particularly in relation to the development and processing of their natural resources.

As regards exhaustible natural resources, such as the oil of the OPEC member states, it is vital that the rate of the transmission of technology should keep pace as far as possible with the mean rate of exploitation, which is now being stepped up in the interest of the economy and progress of the advanced countries.

A large proportion of the planned or new petrochemical complexes, oil refineries

and fertiliser factories should be built in the territory of the OPEC member states in co-operation with the industrial states for the purpose of exporting to the advanced countries and guaranteeing that these products will reach the markets of these countries.

There should be sufficient protection against reduction in the value of the external reserves of the OPEC member states as well as guarantees of the security of their investments in the advanced countries.

Furthermore, the Kings and Presidents consider it essential for the advanced countries to open their markets not only to oil and other primary products, but also to goods manufactured by the developing countries and to regard the discriminatory methods adopted against the developing countries, including the members of OPEC, as being in conflict with the spirit of co-operation and partnership.

Monetary reform

12. The Kings and Presidents note the current disruption of the international monetary system and the absence of norms and documents needed to protect trade exchanges and the value of the financial assets of the developing countries. They stress in particular the constant need for the adoption of measures to safeguard the legitimate interests of the developing countries.

They also stress that the mobilisation of the financial resources of the OPEC member countries and the advanced countries and the technical capabilities of these countries for aiding the developing countries will greatly help in solving the international economic crisis. They stress the need for fundamental and urgent measures to remedy the international monetary system, with a view to strengthening the mechanisms for expanding trade, developing production resources and ensuring a balanced growth of the world economy.

They note that the steps taken so far to redress the international monetary system have failed because these initiatives did not aim at removing the injustice inherent in the structure of that system.

The power of taking decisions which affect the value of currency reserves and of the Special Drawing Rights, the price of gold and the role of gold in the international monetary system must not continue to rest with one side and must not be negotiated by the advanced countries alone. It is essential that the advanced countries contribute to a genuine reform of the world monetary and international financial systems and that they ensure fair representation for all developing countries and safeguard their interests.

The reform of the currency and financial systems should allow for an ample increase in the share of the developing countries in the making of decisions, and in controlling and participating in the spirit of community of interest in world development and on an equal footing. The Kings and Presidents have therefore decided to set up machinery for consultation and co-ordination among their countries within the framework of their solidarity in order to promote a true reform of the international currency and financial systems.

OPEC co-ordination

13. The Kings and Presidents attach the utmost importance to the strengthening of OPEC, especially in co-ordinating the activities of the national oil companies within the framework of the Organisation and the Organisation's role in the world's economy. They consider that there are specific tasks of the utmost importance to be implemented. These require co-ordinated planning among their countries and the co-ordination of their policies in the sphere of oil production, conservation, pricing and marketing – as well as in all financial matters of common interest. Co-ordinated planning and economic co-operation among the member countries would aid the world's development and stability.

14. The Kings and Presidents wish to voice their deep anxiety about the current world economic crisis, which is a threat to stability and peace. At the same time they realise that the crisis has generated an awareness of problems, the solution of which will contribute to the security and prosperity of all mankind.

Aware of the aspirations of the peoples of the whole world and anxious to promote the settlement of the major problems affecting their life, the Kings and Presidents declare that they have agreed that their states shall implement measures designed to usher in a new chapter in international co-operation.

The advanced countries, which possess most of the instruments of progress, prosperity, and peace, as well as most of the instruments of destruction, should respond to the initiatives of the developing countries with similar initiatives, seizing the historic opportunity made available as a result of this critical situation to open a new chapter in the relations among peoples. This would alleviate the distress resulting from the disturbance in the relations of those who possess the elements of power and the accompanying atmosphere of instability resulting from the prevailing chaos in the world economies. It would open the door to confidence and peace and promote an atmosphere of true international co-operation which would be most advantageous to the developing countries and to which these countries would contribute with their gigantic resources.

Whereas man's genius has provided people with scientific and technological progress and great means of overcoming the hazards of nature and effecting significant changes for the better, the future of mankind ultimately depends exclusively on mankind's ability to mobilise its creative power and work for the good of all and in the interest of all human beings.

The Kings and Presidents of the OPEC member states express their deep faith in the ability of all peoples to set up a new economic system based on justice and fraternity to enable the world of tomorrow to assure progress for everyone on an equal footing in a spirit of co-operation, stability and peace. They therefore address this warm appeal to the governments of the world's other states and officially pledge to provide the full support of their peoples towards achieving this objective.

Source: Kubbah, Abdul Amir Q. (Acting Chief of OPEC's Information Department) OPEC Past and Presen Petro-Economic Research Centre, Vienna, September 1974.

CHAPTER IX

OPEC's Thinking

(Statements of Member Countries Spokesmen)

The Resolutions of successive Conferences are not the only means to convey OPEC ideas and objectives to the outside world. In fact, Resolutions represent the culmination of a slow process of exchange of views among oil technocrats and leaders of opinion in Member Countries. The Thinking of OPEC and its Member Countries on oil issues is reflected in speeches, lectures and interviews given by responsible men from Member Countries, in papers presented at oil seminars and congresses, in books, pamphlets and articles written by oil men in producing countries, in records of negotiations conducted with operating companies and consuming nations, in Minutes of Conference Meetings and in a variety of other documents and media. An attempt will be made here, within the space of this chapter and the next, to include, in a chronological order, what is considered to be the most representative of views and ideas expressed.

NEGOTIATION OR LEGISLATION?

(In a speech delivered by H. E. Dr. Chairul Saleh, Indonesia's Minister of Basic Industry and Mines, on the occasion of the opening of the Seventh Conference in Djakarta in November 1964, the following passages are of special interest:)

Indeed, OPEC is still an infant and in its youth has already come across difficulties that cannot be easily overcome. However, as I once said in one of your Conferences "Man bettelt nicht um ein Recht, um ein Recht kaempft man." For that reason, we are willing to cooperate with everybody, but with cooperation as two equal partners. For this we have a saying in our language: "duduk sama rendah,

berdiri sama tinggi," roughly translated: "We need them as partners, not as leeches."

Let us be realistic after four years of negotiations with the oil companies. The time is now ripe enough to make a comparison of the efforts we have made and the results we have achieved.

Each of us, I am sure, will then be entangled with the specific question to be answered and the conclusions to be drawn, but in the context of our common objectives there is no doubt that we are confronted with the principle question: that is, whether negotiations proper is the only instrument to achieve the goal we are still striving for.

For Indonesia—talking out of experience—the answer from the beginning is clear and obvious: that negotiation only is not an effective instrument. We have acted in the past, and we will in the future act accordingly.

Therefore, coming back to the fundamental question whether negotiation proper is the effective instrument, I strongly suggest to all of you that it is now the time that we all adopt a new approach towards the oil companies. The new approach should be based on possible action from our side which will enforce our Resolution to an extent reasonably possible, not the least of which is to create a better bargaining position for negotiation. I know there will be difficulties to overcome and lots of preparation to be made, but we also know that in trying to realize our common objective we cannot consequently avoid sacrifices.

CHANGING CIRCUMSTANCES, OIL PRICES

(At an oil seminar held in Beirut, H. E. Ahmed Zaki Yamani, Saudi Arabia's Minister of Petroleum and Mineral Resources, gave an address on 3rd June, 1968, entitled "Aspects of Oil Policy for the Arab Countries and the Relation of Arab Policy to that of OPEC." Questions and answers followed and two of the most interesting of these are given below:)

Q: You have spoken of the principle of changing circumstances as the determining factor for the amendment of concession agreements. But who exactly is to decide (a) that the change in circum-

stances has in fact taken place, and (b) what relevance such change as may have occurred shall have vis-à-vis the proposed concession amendments?

A: That is a very good question. Let us take it step by step. Firstly, we have to agree that changes in circumstances do in fact provide a justification for changes in the concession agreements. I don't think that even the oil companies would challenge this. Now, who decides? So far both parties are deciding through negotiations. But your question is a very valid one, for the present procedure is obviously unsatisfactory. There should be an impartial body to decide on matters like this. At present no such impartial body exists; but in Saudi Arabia we shall be setting up a court where impartiality will be beyond question. It is provided for in our Mining Code and has been accepted in the new oil agreements we have concluded in the past few years. The charter of the Arab petroleum organization (OAPEC) also makes provision for a similar type of court. I believe that such a court might have jurisdiction in such matters as changing circumstances.

Now let us take a concrete example of an issue such as the one I have already mentioned, namely, partnership. Here no one can deny that a change in circumstances has in fact occurred: numerous oil companies are operating throughout the Middle East and North Africa on a basis of partnership with the national oil companies of the producing countries. Let us further assume the worst: that the major oil companies concerned stubbornly dig in their heels and refuse either to recognize the change or to cooperate in any way in applying it to their own operations. What should a government do in these circumstances, in the absence of an impartial body empowered to pass judgment on such matters?

The government, of course, has sovereignty and it can legislate; this is indisputable. But in our case it is against our philosophy to take unilateral legislative action against foreign investors in our country. In other words, we have this weapon but we don't want to use it. We are doing our utmost to avoid trouble, but it may be inevitable. You all know the old saying "you can't corner a cat"—so of course you can't corner a government either.

Thus far our relationship with the companies has been a happy one. In a closed room we sit down and quarrel, but finally we reach an agreement. But if they now choose to withdraw from the cooperative spirit, the result could be a sad one.

Q: Why do the producing governments insist on retaining the fictitious posted prices as their tax base? Would it not be better and more realistic to shift to realized prices and simply raise the tax rate to make up the difference in revenue?

A: No sir! The posted price is absolutely essential for us. Firstly, without it, it would be impossible to plan our budget—which in Saudi Arabia is 90 percent made up of oil revenue. With the posted price we have a firm tax base to determine our income in advance. But the realized price fluctuates. How could I link my budget to the market for oil in Europe?

Secondly, the posted price is of vital importance for maintaining price stability in world markets. Using the posted price as a tax base serves to provide a definite price floor—namely the tax-paid cost—below which no oil company can afford to sell its oil in the market. But if we work on the basis of realized prices, then the only floor to prices is the mere cost of production. Let me illustrate this. Firstly calculating taxes on the basis of realized prices: let's say the cost of production is 20 cents a barrel and the company can sell for $1.00 a barrel. Then it pays the government 50 percent of the difference—40 cents—and that's all. Now maybe next year the company can only sell for less and so on downwards. There comes a point where no amount of juggling with the tax rate can possibly make up for the lost revenue.

However, working on the basis of the posted price—say $1.80 a barrel—the situation is very different. The company then pays the government half the difference between the cost of production (20 cents) and the posted price ($1.80)—that is to say 80 cents. This means that the company has a minimum tax-paid cost of $1.00 a barrel, which sets an absolute floor to its price. It cannot go out into the market and dump its oil; it will have to sell at a price considerably above $1.00 in order to make a decent profit. This is why posted prices are absolutely vital for the producer governments.

NECESSITY OF PARTICIPATION

(The following are extracts from an address given by H. E. Abdul Rahman Al-Ateeqy, Kuwait's Minister of Finance and Oil, at a meeting of the U.S.-Arab Chamber of Commerce in New York in October 1968:)

It is no longer enough, particularly in developing countries, that foreign enterprises make their contribution to a host country merely through the payment of taxes and royalties. This is specially true in the case of oil companies operating in such countries. It is deeply felt that the relationship between host countries and foreign enterprises should be more active and direct, instead of the host government merely playing the role of the sleeping partner. This form of relationship offers no significant opportunity for the government in the management and utilization of the country's vital natural resources. This unhealthy situation has to be remedied.

One desirable means of establishing long-lasting and appreciable collaboration between a host government and a concession-holding company is the participation of the government in the ownership and operation of such a company. This would not only give the government a more active role in the management of the most important sources of its national income, but it would also place the foreign company on a firmer ground. In our country, as indeed anywhere else, a partner is more welcome than an exploiter.

Another aspect of the role of foreign investment which needs stressing at this point is the fact that a foreign investment in a developing economy should make every effort to integrate itself into the local economy to the greatest possible extent, relying on its various sectors for support and services. There is always much to be benefited from locally. However, in the absence or scarcity of local skills, it is the moral obligation of foreign enterprises to assist in developing them, mainly—perhaps—by training nationals in the various fields which lie within their industry, and affording them greater opportunities in applying what they have acquired by means of assuming active responsibilities within the organizations of the foreign enterprises.

IRAQ AND THE OIL COMPANIES

(The following is an excerpt from the Opening Address, delivered by the President of the Republic of Iraq, at the Inauguration of the OPEC XVII Conference in Baghdad on the 9th of November, 1968:)

Iraq has undergone much suffering because of the negative policy of the oil companies which is based on manoeuvres and procrastination. Conspicuous lagging in production has been one consequence. And a list of problems and differences between us and the companies are outstanding. They have remained unsolved waiting for a just solution.

In the past Iraq endeavoured to solve these differences by means of negotiations and understanding with the companies so as to get her legitimate rights. But the companies never failed to follow their traditional policy of procrastination and manoeuvres. Consequently Iraq had to recourse to legislation to secure her legitimate rights. Thus Law No. 80 of 1961 dealing with the problem of the areas of exploitation was enacted and to Iraq were restored all the areas and fields that the companies did not exploit.

This Law was a turning point in the oil policy of Iraq and a new step towards the establishment of an independent oil industry. In 1967 Law No. 97 was enacted to complement the first Law.

It gave possession of these fields to the Iraq National Oil Company and prohibited the granting of concessions and any grant of a similar nature as a means for petroleum exploitation.

The 17th July Revolution, dear brothers, has, from the outset taken expeditious practical steps to draw up and implement a policy for the direct national exploitation of oil resources by supporting and strengthening the Iraq National Oil Company.

The oil companies operating in Iraq are called upon to reconsider, now more than any time in the past, their policy toward our rights. The policy of procrastination must be abandoned as a means for the solution of the problems and other matters outstanding between us. The companies will reap no fruit from such a policy.

Brothers:

The Organization of the Petroleum Exporting Countries did not

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come into being by accident nor did it come to consider a particular problem and take a decision about it. Its raison d'être is the mutual interests of member countries, the unity of their goals and the similarity of the problems they face. These same factors will guarantee its continuous existence and promote cooperation and coordination among its members. The unity of opinion among these states is a force guaranteeing the protection of their rights and interests which are of the same nature although each state has its special circumstances.

ALGERIA AND OPEC

(The following passages are excerpts from President Houari Boumedienne's speech at the opening of OPEC's Twentieth Conference in Algeria in June 1970:)

Algeria, which has been a member of this Organization for one year, salutes it as an institution of far-reaching significance, in so far as it has provided a beneficial and resilient framework within which countries which export a vital raw material have been organized to coordinate their efforts to stem the flood which is sweeping away their interests and eroding their remaining portion of the proceeds from the exploitation of their natural resources.

The maintenance of oil producing countries as reservoirs of raw materials and the constant deterioration in what are known as the terms of trade, are conducive to a situation whereby the major part of the proceeds from the exploitation of the natural resources of developing countries falls into the hands of the rich countries, by virtue of the means used until now to determine prices and the system regulating economic exchanges in the international sphere in general. Thus the basic hallmark of the imperialist era, which governed relations between underdeveloped and oppressed peoples and the rich imperialist states, is in essence perpetuated and continues to influence exchanges between the two groups even after the recovery by the former of their freedom and political independence.

Algeria has made it clear on various occasions that the situation cannot be dealt with by theorizing; the real solution to the problem is only to be found in adopting clearly outlined plans with defined

objectives, involving effort and sacrifice, and aimed at bringing about basic revolutionary changes. The problem facing us is that of a struggle which is in its form and essence no different from the struggle for liberation waged by the colonized peoples and also by those who were independent but endured the severest forms of pressure and exploitation.

COMMENTS ON OIL POLICY

(H. E. Dr. Rafael Caldera, President of the Republic of Venezuela, made the following remarks at the Inaugural Ceremony of the XXI Conference held in Caracas on the 9th December 1970:)

We believe that the international community itself is becoming more and more important and is demanding social justice. It is demanding that relationships between countries be set not on the basis of the power or wealth of each country, but rather in terms of the responsibility each one has for universal welfare. That is why the issue which has been brought up on the subject of raw material prices, and particularly a raw material which is depletable and which is as important as oil is no longer a matter of negotiation of vested interests, it is a matter of justice. It would be a tragic mistake to approach relations among producers through suicidical and ruinous competition, each one trying to sell more volumes at a lower price. What we have is worth a great deal; it represents a treasure, a treasure not only for our own generation but for future generations. It is a crime to waste. We know exactly the amount of increased demand existing or available supply, and it is our responsibility, as leaders of countries producing and exporting petroleum, to obtain from this wealth which providence gave us, to generate the resources required for creating sources of employment and for implementing development programmes. Moreover, we know that an extractive industry, such as oil, does not include among the benefits it produces that of a high rate of employment. As technological progress goes forward, the number of permanent workers employed in extracting and delivering oil diminishes, that is why in each one of our countries we feel the urgency of transforming the financial profit obtained from oil into stable employment opportunities for the majority of the population of our countries, for these populations are obtaining

increasing awareness of their rights and are in a position to demand them.

We know that the future of petroleum is sound, that it represents increased use of energy, of power, and that oil will be the most important fuel for energy. All countries will require a great deal of petroleum if they wish to become developed countries, and industrial countries which have already reached this stage find that their demand grows at such a fast rate that producers who flooded markets previously and created difficult conditions for other oil suppliers at present are becoming importers of petroleum. We also know that within this sound and sustained progress of petroleum demand, at present and in the future, there may be brief periods during which some relative drops may occur and we must protect ourselves against such situations. We must have foresight in order to adopt procedures, to adopt measures, so that these circumstances may be prevented from causing permanent damage to our countries. Consequently, we also believe in the need for programming, for planning, for rational, sound and logical planning, so as to understand the future changes of consumption and it may help us to prevent destruction, but rather lead us to a better understanding of what the future holds for us.

At the XX Conference of OPEC, held in Algiers, the most recent member of our Organization went very far forward in the work of planning and asked the Organization to carry out studies for different situations which might lead to a solution of what might occur rather than waiting for difficult and threatening situations to arise. All of this means that in the future other nations may join our Organization of petroleum exporters and we hope that when they do they will bring their own experience with them and will help us to harmonize our decisions. We shall welcome them warmly, just as we welcome here most warmly the representatives of the various countries of the various Organizations which are part of this group which has already been copied in other fields of economic endeavours throughout the world. We do not believe OPEC is an Organization against anyone. It is an Organization whose purpose is to strengthen, and direct the position of petroleum-producing countries. The markets of this Organization are international. This Organization, consequently, is international, it is open to one and all but when we

say open, we must always keep in mind those norms and those standards which we must uphold for we know that many difficulties have been faced in the past. We sincerely want to open our relations towards consumer countries because we believe that a sound and sincere nationalistic attitude on the part of producer countries has earned the respect of those consumer countries which can use our petroleum. We are convinced that in maintaining our rights and defending them we are attacking no one, we are simply clearly aware of what belongs to us, of what we have the right to keep and to defend. Consequently, we believe that this Organization must become increasingly aware of its importance and increasingly aware of its own strength. Anything weakening OPEC would ultimately weaken each individual Member. Whatever strengthens it, strengthens each one of us individually, particularly in the demand which we may make in all justice and which leads the way to the welfare and prosperity of our nations.

OIL PRICES AND MANUFACTURED GOODS' PRICES

(The following statements on the above subject were made in the course of an address given by H. E. Mr. Belaid Abdesselam, Minister of Industry and Energy of Algeria and President of the XX Conference, at the inaugural ceremony of the XXI Conference in Caracas on the 9th December, 1970:)

It is also gratifying to note today that in spite of many obstacles and changes which, after all, are part of any human endeavour, we have made noteworthy progress in the pursuit of our goals. If the decade preceding the advent of OPEC on the world scene was marked by a sustained drop of oil prices, which is dangerous for the very survival of our countries, the one ending now has been marked because of the existence of our Organization and the solidarity and coordination of action of its Members, by a stabilization of these prices and a clear improvement in the unit fiscal income of our countries. However, this improvement is only relative and should not be allowed to conceal the fact that fiscal earnings derived from the exploitation of our oil resources on which is based our task of economic and social development, and hence, the expectations and the future of our peoples, are still calculated on the basis of prices

already 10 years old. That is why, to quote our Declaratory Statement of Petroleum Policy embodied in Resolution XVI. 90, we should act so that the prices of our oil may be related to those of manufactured products, and especially capital goods indispensable for economic take-off, to avoid not only a further deterioration of terms of exchange between our countries and industrialized countries, but also, and above all, to try, to attempt, to overtake the effects of inflation in the developed countries of which we are the victims.

It would be unjust, to say the least, that the rich countries should endeavour to continue on the one hand to sell us manufactured goods at ceaselessly increasing prices and, at the same time, to benefit from the use of our oil which is the one and only resource for the majority of our countries, at less and less remunerative prices. This oil, it is to be recalled, has been instrumental in the prosperity of the rich countries. We have reached a time when, contrary to what happened in the sixties, the demand for energy products on major world consuming markets, upsetting all data and forecasts, surpasses the supply in unparallel proportions. This crisis has been felt all over the world and affects not only oil products, but also all other sources of energy. The hikes in oil prices of recent weeks and the steps taken by some consuming countries in order to attempt to prevent a shortage damaging to their economies, are, in the final analysis, the external manifestations and direct consequences of this crisis which takes on the aspects of a long-term trend. That is to say, it is our duty to avail ourselves of this unique occasion in order to carry on our relations with the industrialized countries and their economic operators towards more justice and equity, so as to meet the aspirations of our peoples for development and progress. In this respect, the question of adjusting the prices to a level in keeping with the new situation, which deserves all our attention, should not conceal the other equally important objective set by us, especially in the field of integrating oil activities into the overall economies of our countries, as the transformation of structures on which the exploitation of our wealth was so far based.

DECLINE OF PURCHASING POWER OF OIL DOLLAR

(The following statement was made by His Majesty the Shah of

Iran, at a Press Conference given on the 24th of January 1971:)

I understand that in the past ten years the cost of living has gone up by 39.7 percent in England and 24.9 percent in the United States, but, as they themselves say, the purchasing power of the U.S. Dollar in 1970 has declined to 73 cents. In other words, the value in purchasing power of the dollars we hold has declined while the cost of living there has increased, and the results of this are easy to understand: the rich countries are getting richer and the others remain where they are, as their populations rapidly increase, they are becoming poorer. In the end the day will come when this imbalance results in an explosion.

To sum things up, we are ready to discuss a fair price for oil.

EROSION OF POSTED PRICES

(From an Address by His Majesty the Shah of Iran at a special Session of the XXII Conference at the Senate in Tehran on February 3, 1971:)

Although one of the principal objectives of OPEC, which was established in 1960, was the raising of posted prices to their pre-1960 levels, nevertheless not only has this goal not been achieved, but, due to the general inflation throughout the world, the real value of our earnings has been considerably reduced. The United Nations' Index of Export Commodities for the industrial countries of the West, for example, shows that during the past 3 years export prices have been rising at an average rate of 3 % annually. This makes the United Nation's use of the term "The Development Decade" for the sixties rather ironical in so far as the developing countries are concerned; for, while the prices of the products of the industrial countries have been progressively rising, our real income per barrel from oil has actually fallen by something like 20 %. The old saying that the rich have become richer and the poor poorer, has indeed become a reality during this decade.

Obviously such a situation cannot continue any longer. We must ensure that the God-given irreplaceable natural resources do not depreciate in real value over the years, and that we are protected

against the inflationary effects of general price increases in the industrialized countries.

ALGERIA AND OPEC

(From an extensive review of Algerian oil policy by H. E. Belaid Abdesselam, Algeria's Minister of Industry and Energy, published in the Algiers daily El-Moudjahid on the 23rd of February 1971:)

Algeria's approach to this problem consists in finding within OPEC a characteristic common to all the member countries or to the majority of them. It is a question of finding a common ground which permits the creation of the conditions necessary to draw up a minimum program, comprising a number of objectives which reflect the aspirations of all the countries, whatever differences may exist between them. And it appears from the evidence that this common ground, in the present circumstances, is to be found in financial matters . . . In other words, as far as Algeria is concerned, it has never been a question of asking OPEC to support us on a number of demands which are only explicable in terms particular to our country, and notably by our political context . . . To those who claim that we are not supported by OPEC in certain matters, we reply that we have never asked for such assistance and that our action within OPEC has been confined to the consequences of Resolution 120 . . . We have not asked OPEC to follow us on questions which are specifically characteristic of our country . . . Nor, when it is a question of seeking obligatory investments to maintain and develop our reserves in the future, or when we take over control of foreign companies in Algeria, do we approach the problem—for the moment—as one of rallying the other member countries to our ideas. We simply try, within the framework of our action inside OPEC, to raise these questions as ideas to mature in the oil world, not as objectives to be immediately adopted.

In the same way, working within OPEC can be seen primarily as a means of participating in the movement by the underdeveloped countries to pressure the structure of international economic relations into an evolution favourable to the economic emancipation of these countries; but it also gives Algeria, as far as concerns specific action

for its own problems, support which strengthens its position in the negotiations it undertakes or may undertake. Defending certain key ideas of our oil policy within OPEC, such as control over foreign companies and integration, is a contribution to action by all the raw material producing countries.

The new fact which emerged in Tehran is not so much the form in which the OPEC countries' solidarity was expressed, but above all the transformation in the relations between the oil companies and the Gulf states, which decided to exercise their full sovereignty. This, for Algeria at least, is the most important point, as anything which helps to change the relationship between the states and the companies, anything which tends to weaken the omnipotence of the companies, must be considered as a positive element. This transformation in the relationship represents, far more than any embargo, the best support which the Gulf states could give us.

This does not mean that we consider the figures obtained at Tehran as fair. We think that more could have been achieved since the price of crude oil still remains undervalued. We think that the minimum which should have been achieved to satisfy the dictates of equity was to put the oil of the developing countries on a par with that of the developed countries. This is therefore an objective for the future; for the moment, matters have noticeably changed and that is the essential thing.

PARTICIPATION

(Excerpts from the opening speech given by H. E. Mr. Ahmed Zaki Yamani, Minister of Petroleum and Mineral Resources of the Kingdom of Saudi Arabia and the President of the XXX Conference (Extraordinary) held in Riyadh on October 26, 1972:)

The idea of participation that is now about to enter the implementation stage was one of our dreams and a noble goal for the achievement of which we strove. It was impossible for us to continue being foreign to our petroleum resources with neither control over them nor say in how they are utilized. We started discussing participation with Aramco in 1963. Then His Majesty declared it as an objective to be achieved in a press statement he made in 1964. Finally

our efforts were coordinated and OPEC stood united, proving time and time again that it can enforce its demands. What OPEC demanded this time is a historic event and a fundamental turning point in the international oil industry, that will make it prominent in the world and give its member countries political strength to be taken into account in the world balance of power.

At the time that we are aware of the power of our weapon, we shall use it to build and not to destroy in peace and not in war, in cooperation and not in confrontation. We believe that being aware of one's power is the basis for being aware of one's responsibility. The world needs our oil and we in our turn need the world. In other words we are all like the human body; when one part of it is hurt all the other parts are affected.

OPEC's ACHIEVEMENTS

(From an Address given by H. E. General Yakubu Gowon, the Head of the Federal Military Government of Nigeria, to the XXXI OPEC Conference, held in Lagos on November 29, 1972:)

There is no doubt that, over its twelve years of existence, the Organization of Petroleum Exporting Countries has achieved a pre-eminent position as an outstanding example of successful cooperation by a group of developing countries to secure for themselves better and more stable prices for the export of a major product, in this case petroleum. In the process, the countries belonging to your Organization have been able to secure larger resources for their own development and to guarantee that their continued progress can proceed independently of the advice, the guidance, the competing demands of the vested interests and the costly loans of the rich and economically advanced countries.

Over the last few years, your Organization has achieved better prices for petroleum exports, higher revenues and a more stable basis for estimating Government revenues from petroleum exports. This is very important for the purposes of planning and sustaining rapid economic and social development. At the same time, your Organization has been an inspiration to all Member Countries to develop their own National Oil Companies. These companies will enable our peo-

ple to master the technology of the oil industry. Only thus can we ensure that the resources derived from exploiting our petroleum endowments make the maximum impact in changing our economies into fully modernized ones, guaranteeing to our citizens a decent and rising standard of living.

In all these, however, your Organization has rightly and in accordance with your aims, been conscious of the need to ensure stability in the world oil industry as a whole, and to guarantee the uninterrupted flow of oil to consumers. You have also rightly sought just pricing arrangements to ensure good returns to investment and adequate incentives for continued exploration. This is as it should be.

OIL PRICES

(The following two paragraphs are taken from an article by H. E. Dr. Sadun Hammadi, Iraq's Minister of Oil and Minerals, published in the Baghdad daily "Al-Thaurah" on the 25th of April, 1973:)

The overall relationship between the less developed countries and the highly industrialized countries can be outlined in the following general terms: the oil producing countries are more or less developing countries who need the capital goods produced by the industrialized countries. The prices of these capital goods are constantly rising at ever higher and higher rates due to the monopolistic structure and inflationary tendencies of the economies producing them. On the other side, the less developed oil producing countries are primarily dependent on the production of raw materials whose prices have been constantly declining. Consequently, a transfer of net product from the less developed to the highly developed countries has been taking place via the adverse terms of trade and, therefore, the gap has been widening.

In the field of oil, a basic characteristic of the relationship has been that those industrialized countries, whose need for this source of energy has been constantly rising to meet current high rates of growth, have been able, through the monopolistic setup of the majors and their concession arrangements, to secure their supplies of this vital commodity at a relatively low cost. But this adverse situation has been recently aggravated by the monetary instability which has

increasingly eroded the real purchasing power of the barrel of oil produced by the oil producers. The energy shortage prevailing now and expected to stretch into the future provides an opportunity for an accelerated and sustained economic development of the OPEC countries if it is rightly used. This requires some thought. OPEC has been established to defend prices and to some extent it has been successful, and consequently the financial difficulties of member countries have been to some extent alleviated; but this is not enough for the simple reason that the difficulties facing economic development are not only financial. Implementation of development programs is limited and time-consuming; technological innovations are somewhat monopolized and markets are not open in the industrialized countries. Since economic development is a long-term process comprising the implementation of projects of various kinds, the present dire need of the industrialized countries for this exhaustible source of energy, oil, calls for a new approach to the oil relationship between the producers and the consumers. The issue is how to utilize this situation to bring about a more sustained and accelerated development of the producers in exchange for the longrun security of oil supplies so vital to the consumers. Indeed, a new approach to oil relationships can be to the benefit of all: producers as well as consumers.

CONSUMERS VERSUS PRODUCERS

(An extract from an interview given by H. E. Abdul Rahman Al-Ateeqy, Kuwait's Minister of Finance and Oil, to the Middle East Economic Survey, as carried by that publication on July 6th, 1973:)

In OPEC we are, as you know, totally opposed to a front of the oil consumers whose purpose would be to confront us and dictate to us. But on this question of inflation and energy costs we do indeed seem to be caught in a vicious circle which could be really dangerous for the whole world. As oil prices go up und up under the pressure of the demand/supply imbalance, so the developed countries retaliate by putting up the prices of the goods they export to us. This results in a snowball which hurts most of all those underdeveloped countries which don't have any oil resources. So I think—and this is my own personal feeling, not that of OPEC or the Kuwait Government—

that if we are really prepared to tackle the problem constructively on a world-wide basis, arrangements should be made for some ministers of the consuming nations—not just the oil ministers, but the ministers for foreign affairs, finance, economy and industry as well—to sit together with their counterparts in the producing countries in order to seek stability.

For their part they would have to freeze their export prices, and in doing so they would also help the non-oil developing countries. They can't tell us not to raise oil prices if they at the same time inflate the prices of their exported goods and devalue our holdings in the banks. They would have to freeze for some time and even bring down their export prices in order to convince us not to press so hard for more dollars for each barrel of oil.

Secondly, this sort of gathering would provide a good opportunity to impress upon the big industrialized oil consumers that the oil producers are not just ranches which they can cultivate and ignore. The producers must have fruitful channels for investment. So the developed nations should give the producing countries a chance to industrialize by helping them with technology and markets. That's the thing.

USE OF OIL AS A POLITICAL WEAPON

(From an interview given by H. R. H. The Ruler of Abu Dhabi, Shaikh Zayed Ibn Sultan Al-Neheyyan, to the Beirut weekly Al-Hawadith, and published on 24th August 1973:)

Q: Zionist propaganda seeks to portray the Arabs as backward bedouins who squander the world's wealth on their pleasures while threatening civilization by announcing their intention to cut off the oil?

A: As for squandering wealth, we bedouins have made greater progress than in any other era or any other country. At least we do not squander our money on killing people and on the arms industry. As for threatening the world, Americans have asked me about our attitude towards the energy crisis and whether we will cut off the oil. I said to them: we are Arab Muslims, and our religion and civilization enjoin us to cooperate with other peoples and to meet good

with good. The world today is divided into one part with the soul, that is the Arabs, and one with the body, the West. We have the energy and you have the industries, and without a meeting of the soul and the body there is no life. Any separation of the two will only result in death. We want to give to the West and to take from it, and there is no taking without giving. We Arabs do not interfere in America's affairs and we do not ask you to support us, but we do ask you to take a neutral stance. If you cannot support the person who is in the right, at least do not help our enemies against us. As for assisting our enemies both secretly and openly and then asking why the Arabs dislike you, that is a pointless question. Ask yourselves—if a country assists your enemy would you remain friendly with it? I also said to the Americans that in the past when you gave the Arabs a dollar or a gun, you gave Israel ten. Now you are giving the Arabs nothing and giving to Israel without counting the cost. Either you stop your support to Israel or else you must face the results.

PARTICIPATION AND MONETARY RESERVES

(Excerpts from an interview given to the Beirut weekly Al-Hawadith by Prince Saud Al-Faysal, the Deputy Minister of Oil and Mineral Resources of Saudi Arabia, and published on the 31st of August 1973:)

Q: Let us stick to oil. There is a big debate going on regarding participation. Some countries are demanding 51 percent participation to acquire control over production, whereas you accepted a 25 percent share.

A: In point of fact, the difference in points of view stems from the confusion of two issues. The first issue is the sovereign right of states over natural resources, and this right is guaranteed by the agreements irrespective of the percentage of participation. It is an incontestable and unnegotiable right. When the Arab states decided to cut off oil supplies in 1967, they did so despite the fact that they did not have any equity interest in the companies' capital, because this was a political decision linked to the right of sovereignty. The second issue is participation, which is a commercial matter subject to various

factors, among which is the ability of the state concerned to benefit from the required participation share and the return it gives.

Q: What about the campaign that has been launched in connection with the accumulation of foreign currency reserves by the oil producing countries and their inability to spend them?

A: The error of those who are carrying out this campaign is to assume a particular scale of spending and to make their calculations on this assumption, whereas it is not really possible to postulate a ceiling for government spending. There are several levels at which development projects and services can be carried out. I cannot envisage, for example, that our educational standards will stop where they are now so long as we have the resources to match the highest educational standards in the world. The same can be said of health services. This all means that the level of spending will increase proportionately to the increase in revenue.

Q: Does this mean that crude oil production will continue to grow?

A: The increase in production would inevitably lead to the depletion of reserves, which makes it imperative for us to diversify the country's sources of income. We are therefore working to industrialize our country so that we will free ourselves from the domination of the oil sector and be able to control it more effectively.

GUNBOAT DIPLOMACY

(Selected questions and answers from a press conference given by H. E. Mana Saeed Otaiba, United Arab Emirates Minister of Petroleum and Industry, on December 5th, 1973:)

Q: How seriously do you take the threat of the use of force against the Arab oil producing countries?

A: Gunboat diplomacy is gone for ever, never to return. Oil is a two-edged weapon for the consumers as well. If the consumers cooperate with us they will get our oil to use for maintaining their prosperity. On the other hand, if they attempt to take our oil by force, they will be burnt by it.

Q: Greater emphasis is now being placed by Arab oil producing countries on the need, in the long term, to slow down the growth in

their oil production as a conservation measure. Would you elaborate on this?

A: We were considering oil conservation measures long before the war broke out and it is an issue which is totally unrelated to the use of oil as a weapon. I wish to emphasize this point lest there be any misunderstanding, especially since Zionist circles are accusing the Arabs of resorting to conservation as a means of increasing the price of their oil. The Arabs do not need to have an alibi or an excuse for regulating their production. We have made it abundantly clear that we are prepared to produce more oil than we need because Western civilization depends on our oil and we do not want to hurt them. But you must appreciate our sacrifices and go very far towards accommodating our legitimate political and economic aspirations.

Q: What are the guidelines employed by Abu Dhabi for differentiating between friendly, neutral and hostile countries in applying the oil embargo and cutbacks?

A: It is difficult to draw a sharp line between friendly and neutral countries. For example, the EEC countries, with the exception of Holland, are considered friendly. Even within this category one can identify various shades of friendship. For example, from the very start we made it clear that Britain and France would get the same quantities of oil as they were receiving before the cutbacks. They supported Arab rights and made fair and just statements. We consider those nations friendly which support the three basic Arab demands, namely: (1) Total withdrawal of Israeli forces from occupied Arab territory and repudiation of the acquisition of territory by force; (2) the return of Jerusalem to the Arabs; and (3) the safeguarding of the rights of the Palestinian people.

COMMENTS ON OIL PRICES

(From a statement made by H. M. The Shah of Iran on the 23rd of December 1973, as published by "Kayhan International" on 25th December 1973:)

So it was becoming really a wild price market, based on nothing conrete. We suggested to the members of OPEC—to the regional Gulf members and the others who came as observers—to base the

whole thing on this new concept: that is, to compare the price of oil to other sources of energy, because this is the only advisable, wise course that could be discussed, and sustained in argument. How much does it cost you, or will it cost you, to exploit these other sources of energy? How much will it cost to extract oil from shale? How much will it cost to refine that oil? What would be the price of handling shale oil? The price of transportation of shale oil? How much would be the price of coal? How much would be the price of gasification of coal?

When we know that oil has additional advantages over shale and coal because we could never get all those derivatives from shale or liquefied coal or gasified coal that you can get from oil. Really oil is almost a noble product—we were almost careless to use oil for heating houses or even generating electricity, when this could so easily be done by coal. Why finish this noble product in, say, 30 years' time when thousands of billions of tons of coal remain in the ground.

The world should have started to concentrate on coal years ago, and diversify its sources of energy. We should try to find, as soon as possible, new methods of generating atomic energy in an economic way, and probably this will be a fast-breeder system as soon as possible. Electric bulbs should be lit by that kind of energy. Trains should be put in motion by this kind of energy. Factories should run on that kind of electrical energy. We have got to start to develop solar energy or whatever we could take or produce from water. Probably there are other kinds of energy that I am not aware of and will be found in the future.

So I have suggested to the Gulf members of OPEC that we have to set a price which will go into effect on 1 January 1974. This will correspond now to the minimum price that we will have to pay either to get the shale oil or liquefaction of coal or gasification of coal. We shall propose this to the OPEC members which will meet eventually on 7 January to adopt this policy as a whole. And then OPEC may enter into discussions with OECD to study together what will be the real price of extraction of oil from shale, the liquefaction of coal or gasification of coal, and what is the added value of oil in terms of easier handling and transportation and less pollution, and especially all the other derivatives that can be obtained from oil and

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not from other sources. With atomic energy you could just generate electricity or steam. But with oil we can produce, if I am not mistaken, about 10,000 derivatives in the petrochemical field.

If we come to some results in agreement with the OECD countries, then eventually we will have, for a generation or two, assurances and counter-assurances for the costs of energy upon which future world industries could be based. And then we will propose two options: either the purchasing power of our oil income should keep pace with the rates of inflation in the industrialized nations; or we are willing to have a fixed price for oil provided we receive the amount of goods that our oil could purchase for fixed prices also.

CHAPTER X

OPEC's Thinking

(Statements by Secretaries General and other OPEC's Spokesmen)

RELATION BETWEEN PRICES OF OIL AND THOSE OF MANUFACTURED GOODS

(Dr. Fuad Rouhani, OPEC's first Secretary General, delivered a speech at a Consultative Meeting held in Geneva on the 1st of July, 1963, in which he said:)

There is a Persian proverb which says that if God so wills, good will come out of evil. That is not a bad adage to apply to the birth of our Organization. That it is a creation of good hardly needs pointing out, though I shall presently explain why, but what was the evil source from which it sprang? It was the exercise by the oil companies of a unilateral ability to modify, without consultation with the producing countries, the posted prices of oil. In 1960 they modified these prices downwards for the second time in two years, thereby seriously cutting the per-unit revenues earned by those countries from their oil exports.

This situation, which applies to petroleum too, is aggravated by the fact that the prices of manufactured goods which our countries have to buy from the industrialized countries continue to increase year after year. On the validity of this point, which has been questioned by the oil companies, we now have the authoritative words of no less a person than the President of the United States, who in the course of a visit to Bonn only a week ago said: "We can't help but be concerned by the fact that the price of raw materials of the underdeveloped world steadily declined relative to the price of manufactured goods, and therefore the economic position in some ways

is worse in spite of all the aid we've given. So, unless we work hard and progressively and with imagination and idealism, we may find ourselves a rich area in a poor world which is subject to all the influences that poverty brings with it and ultimately we would be affected." The same conviction is expressed in the Report which the Director General of the International Labour Office submitted to this year's session of the ILO Conference held here. He says, "Prosperity in the industrialized countries could not long be sustained if persisting poverty and rising frustration in the less-developed countries were to endanger the peace of the world."

LONG DURATION OF OIL CONCESSIONS

(The following paragraph is a quotation from an OPEC paper entitled "Radical Changes in the International Oil Industry during the Past Decade" presented in November 1963 at the Fourth Arab Petroleum Congress:)

The privileges granted to the concessionaire companies throughout the Middle East are of unusually long duration. Nowhere else in the world have companies been able in modern times to obtain a guaranteed maximum rate of direct taxation for a period which, according to the concessions, varies from 40 to 90 years. In addition, for the same period of time, they are in some cases exempt from import duties and other levies which would normally be charged commercial companies operating in the countries concerned; and even when these exemptions are not granted, the companies are allowed to credit them as indirect taxes, against their direct tax obligations, so that no financial advantage is gained by the countries.

GOVERNMENTS AND COMPANIES

(The following passages are taken from an address delivered by the late Abdul Rahman al-Bazzaz, Secretary General of OPEC, to the Iraq Petroleum Company negotiators in Geneva on March 11, 1964:)

Moderation Versus Extremism

First of all, let me start with this principle which I call moderation versus extremism. Let us all be guided by this highly esteemed quality

of moderation in estimating our demands and formulating our ideas. It is worth our while to consider two opposing views concerning the relations between the oil producing countries and the exploiting companies. Some people in the producing countries still believe that the companies are an alien element which aims at nothing but exploitation and are, therefore, in their view nothing but a modern means of imperialism; and so they believe themselves entitled to work for their destruction and complete annihilation.

Happily this is not the view of responsible people in any of the oil producing countries. On the other hand, there are some—let us hope not among responsible people in the companies and responsible authorities—who believe that the producing countries constitute an economic enterprise out of which they are fully entitled to get the most they can without regard to any further consideration, humanitarian, social, legalistic or otherwise. It is their duty—according to this school of thought—to gain as much as they can with no further responsibility whatsoever to the people of those countries from whose lands they are accumulating enormous wealth. These are, I consider, to be the two extremes. Neither is fair, neither is really just. The middle course stands between, and we must pursue our present negotiations in this spirit of cooperation and real partnership; the companies are unable to get their remuneration without the help of the countries producing the petroleum. They are offering the land, the water, the crude oil and the unskilled labor, without which the project would be impossible. On the other hand, producing countries must be aware that the share which they are getting out of their oil could not possibly be attained without the capital, the technique, and the experience of the companies. So each depends essentially on the other. Between themselves they must formulate a partnership in the full sense of the word, and no real partnership indeed can be formulated without genuine cooperation and good faith on both sides. It is in their common interest to develop and further improve this industry for their common benefit.

Reality and Fairness Versus Legality

Let me advance to the second point in my argument, and that is what I call the supremacy of the principle of reality and fairness

over the purely legalistic argument. It is of the utmost importance at the first stage of our negotiations that we be guided by this very high principle of equity. Sticking too much to legalistic argument will not help us in the present negotiations, as indeed it has never been helpful in any really successful negotiations.

Let me for the sake of clarity quote a classic example—classic though a very modern one—that is the relations between Algeria and France. As long as France remained narrowly confined to the legal argument that Algeria was a Province of Metropolitan France, there was no possibility of coming to an agreement with the Algerians. Legally speaking, of course, the French were entitled to believe that Algeria was a Province of France. It had so been stated by many Acts of Parliament enacted in Paris. Further, it had been clearly stated by the Constitution of the French Fourth Republic. So from the legal point of view, France was entitled to believe that Algeria was a Province of France. But was that fair? Was it realistic? Are the Algerians really French? Do they speak the same language? Do they have the same heritage? Do they aspire to the same ideals as the French people? Was France capable of resisting the growth of national feeling among the Algerians who sacrificed hundreds of thousands of lives to vindicate their national entity? It was only when France had a courageous and wise leader who faced reality with a sense of justice that the Algerian problem was solved.

So once again let us all be guided by this spirit of giving pre-eminence to reality and equity rather than to strict legal interpretation of text and articles which confine us too strictly and render us incapable of a realistic estimation and awareness of our present vital position.

May I add, in this connection, that as a student of law in England, I was so much struck by the principle first enunciated in English law that: "When the rules of law and the rules of equity are in conflict, the rules of equity must prevail." I know, of course, the real meaning and legal theory of these principles, but the essence is worth consideration here in our present negotiations. We serve no purpose by saying, for instance, that such and such a demand is an infringement of that article or that concession, or that such and such an act on the part of this or that government is illegal or is a breach of contract,

because arguing this way would entitle the other side to push to the other extreme and ask whether the concessions were legally a contract, and whether there was the necessary ingredient for any valid contract and in particular if there was free will on both sides of the contracting parties.

So, the best way to protect our idea is to be realistic and to be directed by a deep sense of fairness and equity.

Change Versus Stagnation

The other principle which must guide us in our present negotiations is what I call "change versus stagnation." In a changing world, changing circumstances, changing standards of living, changing economic and political structure, and ideas, changing ideals and principles, we cannot stick rigidly to previous conditions. "Change" is bound to be the order of the day, and to quote a phrase popularized by its use by an eminent politician, "the wind of change" must finally affect every aspect of our life. So the companies must not cling to the past. They must recognize the enormous pressure of this wind of change and must adapt themselves to face that reality with an accurate estimation of its power.

OFFTAKE PROGRAMMES

(In the course of a talk given by Dr. Francisco R. Parra, an ex-Secretary General, at the Imperial Defence College in London on May 8, 1964, the following was said:)

A more serious problem of control is posed with respect to the offtake programmes of the major oil companies. Each of the major oil companies has large producing interests in almost all of the important exporting countries. At the same time, in the interests of security and in order to put themselves in a better bargaining position vis-à-vis any one country, they maintain a constant cushion of surplus capacity over and above the amount necessary to take care of seasonal fluctuations in demand. This opens up the possibility for the companies of swinging production away from one country and in favour of another if they wish to bring pressure to bear on a particular country where other issues may be under negotiation.

So far this weapon has been employed sparingly by the companies for the fairly obvious reason that liberal use of it would be too dan-

gerous. Reductions of offtake directed at putting pressure on any single Government have not taken violent and obvious forms. If they were to do so, they would constitute too clear a demonstration of the companies' formidable power in this respect and thereby probably provoke a reaction, even on the part of those countries whose production rose, as well as that of the one against which the measures were being taken.

OPEC AND OIL COMPANIES

(Reproduced hereunder are two passages extracted from an address given by Dr. F. Parra at the inauguration of the OPEC XVII Conference in Baghdad on the 9th of November, 1968:)

It is true that the Organization is more a reflection and crystallization of several trends in the world economy, rather than the originator of them, but perhaps I would not be exaggerating unduly in saying that the interplay of forces at work here has in a sense created a dynamic of its own. It is the institutionalization in OPEC of the aspirations of producers to act jointly in self-defence against market forces which are structured so as to favour the consumers in industrial countries disproportionately, that gives the Organization its wider significance. At the same time, the growing but elusive power of large international enterprises that cut across state boundaries and whose enormous and often beneficial contribution to world trade I would be the last to deny, must be met by producers themselves at the intergovernmental level so that a satisfactory system of checks and balances can be properly worked out. Among the things entailed in such a system would necessarily be some unification of oil policies among producing countries and this the Organization is eminently suited to do. With a permanent Secretariat, composed of specialists exclusively from Member Countries in economics, law and technical matters, to shape the details of the broad policy directions laid down by the Conference itself and the Board of Governors; and with twice yearly Meetings of the Conference interspersed occasionally with consultative meetings, the ground work can be laid for the unification of policy towards those international problems which face all Member Countries. There is no need to pretend that this is an easy task, but given the spirit of good faith and goodwill with which all

Member Countries have always approached the problems involved, we can be confident that further progress will be made.

The Organization has on many occasions made its voice heard in consuming countries explaining the important issues as seen from the point of view of producers and seeking to insure the greatest possible measure of understanding between consumer and producer and, indeed, we should never forget as producers that, if cooperation among ourselves is becoming increasingly necessary in order to cope with problems of an international nature, we also have a responsibility towards the world at large, whose needs for oil are continuing to grow at a fast rate and to whom we as a group are the main suppliers. On the other hand, this responsibility cannot be properly shouldered unless it is clearly understood that there must be room for change and adjustment.

THE FUTURE OF OIL, A MIDDLE EASTERN VIEW

(The following are extracts from a speech delivered by Dr. Nadim Pachachi in London on the 19th of September, 1973, at the Conference of the World Energy Supplies organized by the Financial Times in association with BOAC:)

Crude oil prices have always been a most controversial subject in oil economics. The so-called energy crisis and the problem of monetary reserves accumulating in the oil-producing countries, both of which have recently been discovered and widely discussed, are mainly attributable to the short-sightedness and bad planning of the developed nations which chose to build their industrial expansion and way of life on the policy of cheap oil, forgetting that the hydrocarbon reserves are finite and depletable. The answer to many of the questions being asked today is to be found in the cheap energy policy of yesterday. Thus, if oil had been realistically priced, on the basis of its scarcity value, the producing nations would not have remained economically backward and incapable of absorbing the money generated by the sale of increasing volumes of petroleum. There would be no talk of an impending energy crisis, because the world would have already developed other sources of energy.

The first move to reverse the trend towards cheaper oil came in 1970 from Libya, whose high-quality low-sulphur crudes have been

underposted since 1961. Shortly after, OPEC formulated in Caracas certain financial targets designed to raise the price level of oil and the level of taxes collected on it. The Tehran and related price agreements were concluded in 1971 with the international companies to incorporate and give effect to the objectives set forth in the Caracas conference resolutions. Not long after, it became clear that serious loopholes in those agreements existed and needed plugging. It was found, for instance, that the U.S. dollar was losing in value against major world currencies. This type of monetary disturbance could result in great losses to the producing countries if it were allowed to operate unchecked. However, the governments and the oil companies got together in Geneva and found the right solution.

THE WASHINGTON CONFERENCE

(From a Statement by Dr. Khene made at a luncheon given in his honour by the Foreign Press Club in Vienna, on February 11, 1974:)

Now we are witnessing a meeting called by the U.S. Government, limited to the participation of major industrialized countries, those countries which have, themselves, provoked the oil problem as a result of the huge amounts of oil they have consumed, and are still consuming, in wasteful usages. The threats expressed by the U.S. Government against the producing countries, particularly the Arab oil producing countries, are clearly indicative of the goals the American Government is aiming to reach, i.e. to impose its views by using such a strong pressure on developing countries, not only oil producing, but other raw material producing countries, and to claim for themselves some unshared leadership in world affairs.

We think that Washington is surely the wrong place to discuss such an issue, an issue involving the fate of all nations. In my opinion, it would have more sense to have dealt with it in New York. The opportunity is indeed a good one in which to revise a lot of thought and behaviour, confined not only to oil price relationships but extended to what mankind should undertake with a view to achieving a more equitable world.

NEW DEVELOPMENTS ON THE OIL SCENE

(The following paragraphs are taken from an address given by Dr. Khene, OPEC's Secretary General, to the Österreichische Gesell-

schaft für Außenpolitik und Internationale Beziehungen, Vienna, on 28 January, 1974.)

Since this is one of the aspects of these struggles that are now in vogue, I should like at this juncture to deal with an accusation which is intended to be defamatory and which is now fairly wide-spread, unfortunately, even among those who are most sympathetic to the cause of the producing countries, namely, the accusation that OPEC is a new cartel, almost the equivalent of an association of malefactors.

In the first place, I should like to point out that, when speaking of interest groups, it is proper to differentiate between groups representing private interests, to whom the term cartel has been correctly applied, and those defending public interests, as is the case with the OPEC countries. There is a basic difference in nature, which alone would make it unjustifiable to apply that term to our Organization.

Secondly, if I understand matters correctly, a cartel is an agreement among merchants not to sell below a certain minimum price during a glut. In the case of OPEC, however, and as far as the price of oil is concerned, the Organization has acted in the opposite manner. In a situation of scarcity, it tends to moderate the market situation by preventing prices from rising too rapidly to the level of economic equilibrium as determined by supply and demand. That, I think, is interesting enough as an economic fact to deserve emphasis.

In the context of that last remark I now propose to review the factors that led to the transformation of the market from what used to be a buyers' market to a sellers' market. Far from being the result of machinations on behalf of the producing countries, it seems to us on the contrary that the phenomenon is simply linked to what is now generally called the energy crisis. In our view, this crisis has two aspects: one stems from the volume of consumption, which has directly generated the present tension in the market, and the other and more universal aspect raises the problem of the sources of energy themselves and justifies one in thinking that this tension will tend to be permanent.

I should first of all like to say some words regarding the first of these two aspects, since it has recently become the immediate concern of all governments. When I said a moment ago that the

characteristic of the oil market today is a situation of scarcity, I was certainly not thinking of the fact that this failure in supply was due to the consequence of the bombardment of the harbour terminals in the Mediterranean and to the decisions of the Arab oil-producing States to reduce their oil exports. This tension existed long before that last phase of the Middle Eastern conflict. It was revealed to the public at large as the result of the breakdown in supplies in the United States during the winter 1972 — which, incidentally, was a particularly mild winter. The reaction then was talk of a lack of foresight, perhaps even organized for speculative purposes. In fact, some experts with a world-wide reputation then claimed and spread abroad the tale that the entire affair was a plot on the part of the international companies, with the complicity of the producing countries, more precisely, the Arab countries, in order to obtain higher prices. Such theories were aimed more at political than scientific ends, and it can now be seen that they have misfired.

On the contrary, my feeling is that we have certainly entered on a phase in which industrial support structures, made necessary by the mobilization of ever-increasing quantities of oil, are becoming insufficient and ill-suited to operating with complete efficiency. Petroleum operations, whether related to research, prospecting, the working of oil-fields, transportation, refining or distribution, are subject to a number of physical constraints that it will probably become increasingly difficult to control. Even with advance planning, the drilling of a well, the construction of a pipeline and the erection of a refinery are often affected by random factors of various types which increase the period originally expected for the completion of work or retard the commencement of operations. The mobilization of financial aid in order to carry on activity on a wider and wider scale is not the simplest or the least time-consuming of the operations.

Perhaps that very circumstance indicates the change in the nature of the problems encountered, owing to the increase in magnitude of the volume and mass of goods and services to be mobilized. Under these conditions, it will be understood that, though it is theoretically possible to overcome bottlenecks as they appear, the discomfort engendered is no less real and of varying duration, always leading to an inadequacy of supply in relation to demand.

OPEC's THINKING

It seems even more important to me to deal with the second aspect of the crisis. This may throw more light on what may happen in the future, and, incidentally, the not too distant future. In this respect, the decision of the Arab exporting countries to reduce their output has at least two merits. The first is that it has revealed more plainly than was the case last winter how precarious is the equilibrium of the oil market at the moment. The second is that it has drawn the attention of the public at large, particularly in the industrialized countries, to the limited future of oil and thus to the urgency of finding remedies in this field.

Appendix III

Selected Documents on U.S. International Energy Policy October 1973–December 1975

THE DEPARTMENT OF STATE

Selected Documents No. 3

Bureau of Public Affairs
Office of Media Services

U.S. International Energy Policy October 1973—November 1975

The energy crisis emerged as a major international issue through a sequence of sudden and unexpected events—an oil embargo in October 1973 followed by price increases of 400 percent in less than a single year. These actions—largely the result of political decisions—created an immediate economic crisis, both in the United States and around the world. The elements of the energy problem, however, had been developing over the past 20 years: In 1950, the United States was virtually self-sufficient in oil, whereas by 1973 our reliance on foreign oil had reached 35 percent of our requirements. The experience of the embargo and the subsequent massive price rises taught us how vulnerable we had become.

The crisis focused attention dramatically on the reality of increasing global interdependence. The sheer magnitude and complexity of the issues involved in the energy crisis have compelled us to work toward a cooperative response—initially among the oil-consuming countries and ultimately between consumers and producers. In December 1973 Secretary of State Kissinger called for collective action by the nations of Europe, North America, and Japan to meet the challenge. The outcome was the establishment of the 18-nation International Energy Agency (IEA) in Paris in November 1974. The IEA has made remarkable progress in forging consumer solidarity and in paving the way for a meaningful dialogue with the producer nations. This dialogue hopefully will result in a cooperative long-term relationship between consumers and producers.

The course of U. S. international energy policy from the October 1973 embargo to the current preparation for a Conference on International Economic Cooperation can be traced by certain benchmark documents assembled in this publication. Taken together, they provide a comprehensive picture of America's efforts and determination to meet the challenge of the energy crisis through a policy of cooperation and conciliation.

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Arab Oil Embargo

Embargo Reveals U.S. Vulnerability

Excerpt from a statement by Julius L. Katz, Deputy Assistant Secretary for Economic and Business Affairs, before the House Committee on Interstate and Foreign Commerce, November 14, 1973.

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On October 17 the Organization of Arab Petroleum Exporting Countries (OAPEC) announced the adoption of a boycott of oil in support of the Arab war against Israel. OAPEC members agreed at that time to reduce overall production by 10 percent, to embargo all exports to the United States, and to reward "friendly" nations with continuing supplies of oil. The OAPEC boycott has now been expanded to the point where overall production by OAPEC members has been reduced by 25 percent, with an additional 5 percent scheduled for the month of December.

In addition to the United States, the Netherlands has been singled out for full embargo treatment, but reports as to other countries are contradictory. Certain other countries, including the United Kingdom, France, Spain, and Brazil, have been designated as "preferred" countries and as such will be permitted to receive Arab oil at a level equal to their Arab oil purchases during the first nine months of 1973. Most other nations, including such major importing countries as Japan, West Germany, and Italy, are classified as "nonpreferred" and will have to share pro rata any oil remaining from reduced production after the preferred customers have been satisfied. Thus, the impact on this latter group of countries will increase should the boycott continue with progressively larger reductions in production month by month.

As a result of the 25 percent limitation of production now in effect, the availability of oil in the world will be reduced by more than 5 million barrels per day. Should another 5 percent reduction come into effect in December, the decrease in world availabilities could exceed 6 million barrels per day.

Prior to the imposition of the Arab boycott, the United States was importing about 6.3 million barrels per day, of which the Arab producers furnished 1.7 million in direct shipments of crude oil and products refined from Arab oil in third countries. However, even before the cutoff of Arab oil most authorities had counted on importing about 500,000–750,000 additional barrels per day of heating oil from European refineries to cover the additional demands of the 1973–74 heating season. These European supplies will in large part now be lost as a result of the Arab embargo. Thus our total oil deficit during the winter months could be between 2 and 3 million barrels per day, or 10–17 percent of our consumption.

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Washington Energy Conference

Secretary Kissinger Calls for International Energy Cooperation

Excerpts from Secretary Kissinger's address to the Pilgrims of Great Britain in London, December 12, 1973.

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The Middle East crisis illustrates the importance of distinguishing the long-range from the ephemeral. The differences of recent months resulted not so much from lack of consultation as from a different perception of three key issues: Was the war primarily a local conflict, or did it have wider significance? Has the energy crisis been caused primarily by the war, or does it have deeper causes? Can our common energy crisis be solved by anything but collective action?

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The only long-term solution is a massive effort to provide producers an incentive to increase their supply, to encourage consumers to use existing supplies more rationally, and to develop alternate energy sources.

This is a challenge which the United States could solve alone with great difficulty and that Europe cannot solve in isolation at all. We strongly prefer, and Europe requires, a common enterprise.

To this end, the United States proposes that the nations of Europe, North America, and Japan establish an Energy Action Group of senior and prestigious individuals with a mandate to develop within three months an initial action program for collaboration in all areas of the energy problem. We would leave it to the members of the Nine whether they prefer to participate as the European Community.

The Group would have as its goal the assurance of required energy supplies at reasonable cost. It would define broad principles of cooperation, and it would initiate action in specific areas:

—To conserve energy through more rational utilization of existing supplies;

—To encourage the discovery and development of new sources of energy;

—To give producers an incentive to increase supply; and

—To coordinate an international program of research to develop new technologies that use energy more efficiently and provide alternatives to petroleum. The United States would be willing to contribute our particular skills in such areas as the development of the deep seabed.

The Energy Action Group should not be an exclusive organization of consumers. The producing nations should be invited to join it from the very beginning with respect to any matters of common interest. The problem of finding adequate opportunity for development, and the investment of the proceeds from the sale of energy sources, would appear to be a particularly important area

for consumer-producer cooperation.

As an example of a task for the Energy Action Group, I would cite the field of enriching uranium for use in nuclear power reactors. We know that our need for this raw material will be great in the 1980's. We know that electric utilities will wish to assure their supply at the least possible cost. We know that European countries and Japan will wish to have their own facilities to produce at least part of their needs for enriched uranium. Such plants require huge capital investment. What could be more sensible than that we plan together to assure that scarce resources are not wasted by needless duplication?

The United States is prepared to make a very major financial and intellectual contribution to the objective of solving the energy problem on a common basis. There is no technological problem that the great democracies do not have the capacity to solve together—if they can muster the will and the imagination. The energy crisis of 1973 can become the economic equivalent of the sputnik challenge of 1957. The outcome can be the same. Only this time, the giant step for mankind will be one that America and its closest partners take together for the benefit of all mankind.

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Secretary Kissinger Opens the Washington Energy Conference

Excerpts from Secretary Kissinger's opening statement to the Washington Energy Conference. February 11, 1974.

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Let me summarize the U.S. views on the major issues confronting us:

First, the energy situation poses severe economic and political problems for *all* nations. Isolated solutions are impossible. Even those countries, like Canada and the United States, capable of solving the energy problem by largely national means would still suffer because of the impact on them of a world economic crisis. Consumer or producer, affluent or poor, mighty or weak—all have a stake in the prosperity and stability of the international economic system.

Second, this challenge can be met successfully only through concerted international action. Its impact is controllable if we work together; it is unmanageable if we do not.

Third, the developing countries must quickly be drawn into consultation and collaboration. Their futures are the most profoundly affected of all. Unable to meet present prices for oil and fertilizer, they face the threat of starvation and the tragedy of abandoned hopes for further economic development. In the name both of humanity and common sense we cannot permit this.

Fourth, cooperation *not* confrontation must mark our relationships with the producers. We each have legitimate interests. We each face looming dangers. We need each other. If we move rapidly and cooperatively toward collective action, all will benefit.

Fifth, the United States recognizes its own national responsibility to contribute significantly to a collective solution. While we are less immediately affected than others, we see it as a matter of enlightened self-interest—and moral responsibility—to collaborate in the survival and restoration of the world economic system. Project Independence, which will reduce the American demand for world supplies, can be a way station on the road to a new Project Interdependence. We are willing to share American advances in energy technology, to develop jointly new sources of supply, and to establish a system of emergency sharing. We are prepared to

make specific proposals in these areas in the follow-on work of this conference.

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The great goal of American policy for the past quarter century has been to try to achieve a more cooperative world, to put permanently behind us the narrowly competitive approach which has traditionally ended in conflict—economic or military or both. We maintain our faith in the validity of this goal. In pursuit of the common interest, the United States is willing to make a major contribution, in effort, in science, in technology, and in resources, to a common solution to the energy problem.

The United States is prepared to join with the nations assembled here, and later with the producers and other consumers, to make a truly massive effort toward this major goal: the assurance of abundant energy at reasonable costs to meet the entire world's requirements for economic growth and human needs.

To this end, we suggest that this conference consider seven areas for cooperative exploration: conservation, alternative energy sources, research and development, emergency sharing, international financial cooperation, the less developed countries, consumer-producer relations.

1. *Conservation:* The development of a new energy ethic designed to promote the conservation and most efficient use of existing energy supplies is crucial. We need a basic commitment to share the sacrifices and costs of conservation and thus reduce pressures on world supply. The United States recognizes that it is the world's most profligate energy consumer. Yet our own national program has, within the past four months, reduced government energy use by 20 percent, industrial consumption by more than 10 percent, gasoline consumption by 9 percent, and natural gas and electricity consumed in residential and commercial buildings by 6 and 10 percent respectively. We shall continue to expand this program. We are prepared as well to join other consumers in pledging a sustained conservation effort. The United States is willing to collaborate in a review of the national programs of each consumer country, in an appraisal of their effectiveness, and in recommendations to governments for additional measures.

2. *Alternative Energy Sources:* The demands of this decade cannot be met unless we expand available supplies through vigorous development of alternative energy sources.

To produce quick results, we must concentrate on known fuel resources. Coal is in abundant supply, but we need to develop the technology neglected during the period of low-cost oil. Continental shelves and nonconventional deposits—coal, shale, and similar resources—need to be developed rapidly.

The United States is prepared to explore the following possibilities for consumer cooperation:

—A collective commitment to develop the fossil fuel resources that are available within our respective borders.

—Coordinated policies to encourage the flow of private capital into the new higher cost energy industries, such as synthetic oils and gas from coal and shale.

—Governmental arrangements to accelerate the global search for new energy sources such as offshore oil.

—International programs to reduce the vulnerability of the major industrial countries to the interruption and manipulation of supply, such as the orderly conversion of key sectors away from petroleum.

3. *Research and Development:* New technologies, and not only new explorations, can provide us with additional sources of energy. Many of our countries are launching large new programs. Our own national program contemplates the expenditure of more than $11 billion in government funds over the next five years and an expected investment of $12.5 billion in private funds in the same period. But we have no monopoly on the most advanced and promising approaches. It is to our mutual benefit to coordinate and combine our efforts. Thus the United States is prepared to make a major contribution of its most advanced energy research and development to a broad program of international cooperation in energy.

Without a doubt, a significant portion of new energy will be supplied from nuclear reactors, for which increased quantities of enriched uranium will be needed. Within a framework of broad cooperation in energy, the United States is prepared to examine the sharing of enrichment technology—diffusion and centrifuge. Such a multilateral enrichment effort could be undertaken in a framework of assured supply, geographic dispersion, and controls against further proliferation. We shall submit principles to guide such a cooperative enterprise for the follow-on work which we are proposing.

4. *Emergency Sharing:* The allocation of available supplies in time of emergencies and prolonged shortages is essential.

None of us can be certain how the world balance of supply and demand for petroleum will develop or what political contingencies may arise. But we cannot leave our security or our national economies to forces outside our control.

The United States declares its willingness to share available energy in times of emergency or prolonged shortages. We would be prepared to allocate an agreed portion of our total petroleum supply provided other consuming countries with indigenous production do likewise. As we move toward self-sufficiency, our ability for sharing would of course increase.

Building on the earlier work done in the OECD [Organization for Economic Cooperation and Development], definite recommendations should be submitted to governments including:

—A sharing formula;

—Criteria to determine when a supply shortage exists;

—A mechanism which would implement and terminate the sharing arrangement; and

—Complementary programs such as stockpiling and standby rationing schemes.

5. *International Financial Cooperation:* The structure and strength of the world's trading and monetary system must be restored and strengthened. If there is no way for the industrial countries collectively to eliminate the trade deficits created by their higher oil import bills, they can attempt to do so individually only at the cost of enlarging someone else's problems. In addition, the producing nations are accumulating financial claims against the consuming nations at a rate unprecedented in history.

In the past, the various national and international money markets have efficiently recycled oil revenue funds back into the economies of the consuming countries. At least for industrial countries, these markets can in large part continue to perform that function. The removal of our capital controls and the easing of controls in other countries should help. But the magnitude of the new flows could put serious strains on the operations of these markets. The funds flowing to particular consumer countries may not reflect their needs for balance of payments financing; severe instability could result if these funds were repeatedly shifted across currency boundaries without adequate financial cooperation among the industrialized countries. Here again there is a crucial congruent interest between the producers and consumers and an urgent need for cooperative solutions.

Measures to deal with the economic effects of high oil prices must be adopted on a broad front. Recommendations should include:

—New mechanisms to facilitate the distribution of international capital flows from oil revenue surpluses.

—Means for producers and consumers to cooperate in building confidence in investment policies and the integrity of investments.

—Steps to facilitate the fuller participation of producing nations in existing international institutions and to contribute to the urgent needs of the developing consumer countries.

6. *The Less Developed Countries:* The needs of the developing countries are a particularly urgent dimension of the energy crisis. Massive increases in oil import costs are occurring at a time when the export prospects of many less developed countries have sharply diminished as a result of the slowdown in world economic activity. Even at lower oil prices, the balance of payments problems of the less developed countries

would require sustained attention.

Our approach to this human and economic challenge should be based on several principles:

—The developing consumer countries should be invited to join the next stage of our deliberations.

—Developed countries should avoid cutting their concessional aid programs in response to balance of payments problems. In this regard, the United States will urge the Congress to restore our contribution to the International Development Association (IDA).

—The wealth of the producer nations opens up a potential new source of large-scale capital assistance for development. The producer nations should have a special understanding for the problems facing the poorer nations. We should encourage and facilitate their participation in international and regional institutions.

—Urgent measures must be taken to assure sufficient fertilizer supplies for the coming year. The immediate problem is to provide oil at a price that will allow existing fertilizer production capacity to be fully utilized. The longer term problem is to create sufficient capacity to meet the world's rapidly growing needs. The United States would be prepared to contribute its technological skills to such a joint enterprise.

7. *Consumer-Producer Relations:* Our ultimate goal must be to create a cooperative framework within which producers and consumers will be able to accommodate their differences and reconcile their needs and aspirations. Only in this way can we assure the evolution and growth of the world economy and the stability of international relations. We must work toward the objective of preventing coercion of the weak by the strong as of the strong by the weak; the producing nations must be given a secure stake in an expanding world economy and the consuming nations a secure source of supply.

It seems clear that enlightened self-interest of consumers and producers need not and should not be in conflict. Future generations may not enjoy a permanent source of petroleum. Excessively high prices are already calling forth massive investments in alternative energy sources, which raises the prospect of lower prices and shrunken export markets for the producers in the future. But stable oil earnings, at just prices, wisely invested and increasing by the principle of compound interest, will be available as a long-term source of income.

Thus the producers must have an interest in a "just" price and in stable long-term political and economic relations. Therefore, at the consumer-producer conference for which we are heading, let us discuss what constitutes a just price and how to assure long-term investments. A well-conceived producer-consumer meeting, in which the consumers do not seek selfish advantages either as a group or individually, far from leading to confrontation, could instead lay the basis of a new cooperative relationship. But it will do so only if it is well prepared—and if the consumers have first constructed a solid basis of cooperation among themselves.

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Washington Energy Conference Communique

Communique issued at the conclusion of the Washington Energy Conference, February 13, 1974.

Summary Statement

1. Foreign Ministers of Belgium, Canada, Denmark, France, the Federal Republic of Germany, Ireland, Italy, Japan, Luxembourg, The Netherlands, Norway, the United Kingdom, the United States met in Washington from February 11 to 13, 1974. The European Community was represented as such by the President of the Council and the President of the Commission. Finance Ministers, Ministers with responsibility for Energy Affairs, Economic Affairs and Science and Technology Affairs also took part in the

meeting. The Secretary General of the OECD also participated in the meeting. The Ministers examined the international energy situation and its implications and charted a course of actions to meet this challenge which requires constructive and comprehensive solutions. To this end they agreed on specific steps to provide for effective international cooperation. The Ministers affirmed that solutions to the world's energy problem should be sought in consultation with producer countries and other consumers.

Analysis of the Situation

2. They noted that during the past three decades progress in improving productivity and standards of living was greatly facilitated by the ready availability of increasing supplies of energy at fairly stable prices. They recognized that the problem of meeting growing demand existed before the current situation and that the needs of the world economy for increased energy supplies require positive long-term solutions.

3. They concluded that the current energy situation results from an intensification of these underlying factors and from political developments.

4. They reviewed the problems created by the large rise in oil prices and agreed with the serious concern expressed by the International Monetary Fund's Committee of Twenty at its recent Rome meeting over the abrupt and significant changes in prospect for the world balance of payments structure.

5. They agreed that present petroleum prices presented the structure of world trade and finance with an unprecedented situation. They recognized that none of the consuming countries could hope to insulate itself from these developments, or expect to deal with the payments impact of oil prices by the adoption of monetary or trade measures alone. In their view, the present situation, if continued, could lead to a serious deterioration in income and employment, intensify inflationary pressures, and endanger the welfare of nations. They believed that financial measures by themselves will not be able to deal with the strains of the current situation.

6. They expressed their particular concern about the consequences of the situation for the developing countries and recognized the need for efforts by the entire international community to resolve this problem. At current oil prices the additional energy costs for developing countries will cause a serious setback to the prospect for economic development of these countries.

7. *General Conclusions.* They affirmed, that, in the pursuit of national policies, whether in trade, monetary or energy fields, efforts should be made to harmonize the interests of each country on the one hand and the maintenance of the world economic system on the other. Concerted international cooperation between all the countries concerned including oil producing countries could help to accelerate an improvement in the supply and demand situation, ameliorate the adverse economic consequences of the existing situation and lay the groundwork for a more equitable and stable international energy relationship.

8. They felt that these considerations taken as a whole made it essential that there should be a substantial increase of international cooperation in all fields. Each participant in the Conference stated its firm intention to do its utmost to contribute to such an aim, in close cooperation both with the other consumer countries and with the producer countries.

9. They concurred in the need for a comprehensive action program to deal with all facets of the world energy situation by cooperative measures. In so doing they will build on the work of the OECD. They recognized that they may wish to invite, as appropriate, other countries to join with them in these efforts. Such an action program of international cooperation would include, as appropriate, the sharing of means and efforts, while concerting national policies, in such areas as:

—The conservation of energy and restraint of demand.

—A system of allocating oil supplies in times of emergency and severe shortages.

—The acceleration of development of additional energy sources so as to diversify energy supplies.

—The acceleration of energy research and development programs through international cooperative efforts.[1]

10. With respect to monetary and economic questions, they decided to intensify their cooperation and to give impetus to the work being undertaken in the IMF, the World Bank and the OECD on the economic and monetary consequences of the current energy situation, in particular to deal with balance of payments disequilibria. They agreed that:

—In dealing with the balance of payments impact of oil prices they stressed the importance of avoiding competitive depreciation and the escalation of restrictions on trade and payments or disruptive actions in external borrowing.* [2]

—While financial cooperation can only partially alleviate the problems which have recently arisen for the international economic system, they will intensify work on short-term financial measures and possible longer-term mechanisms to reinforce existing official and market credit facilities.*

—They will pursue domestic economic policies which will reduce as much as possible the difficulties resulting from the current energy cost levels.*

—They will make strenuous efforts to maintain and enlarge the flow of development aid bilaterally and through multilateral institutions, on the basis of international solidarity embracing all countries with appropriate resources.

11. Further, they have agreed to accelerate wher-

[1] France does not accept point 9. [Footnote in original.]

[2] In point 10, France does not accept paragraphs cited with asterisks. [Footnote in original.]

ever practicable their own national programs of new energy sources and technology which will help the overall world-wide supply and demand situation.

12. They agreed to examine in detail the role of international oil companies.

13. They stressed the continued importance of maintaining and improving the natural environment as part of developing energy sources and agreed to make this an important goal of their activity.

14. They further agreed that there was need to develop a cooperative multilateral relationship with producing countries, and other consuming countries that takes into account the long-term interests of all. They are ready to exchange technical information with these countries on the problem of stabilizing energy supplies with regard to quantity and prices.

15. They welcomed the initiatives in the UN to deal with the larger issues of energy and primary products at a world-wide level and in particular for a special session of the UN General Assembly.

Establishment of Follow-on Machinery

16. They agreed to establish a coordinating group headed by senior officials to direct and to coordinate the development of the actions referred to above. The coordinating group shall decide how best to organize its work. It should:

—Monitor and give focus to the tasks that might be addressed in existing organizations;

—Establish such *ad hoc* working groups as may be necessary to undertake tasks for which there are presently no suitable bodies;

—Direct preparations of a conference of consumer and producer countries which will be held at the earliest possible opportunity and which, if necessary, will be preceded by a further meeting of consumer countries.[3]

17. They agreed that the preparations for such meetings should involve consultations with developing countries and other consumer and producer countries.[3]

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[3] France does not accept points 16 and 17. [Footnote in original.]

International Energy Agency

Establishment of IEA

News release issued by the Organization for Economic Cooperation and Development in Paris, November 15, 1974.

The Council of the Organization for Economic Cooperation and Development (OECD) today decided to set up an International Energy Agency within the organization.

The task of this agency will be to carry out a comprehensive program of cooperation on the lines determined in the preparatory work of the coordinating group set up following the Washington Energy Conference. The main aims are:

—Development of a common level of emergency self-sufficiency in oil supplies, common demand restraint measures, and measures for the allocation of available oil in time of emergency;

—Development and implementation of a long-term cooperation program to reduce dependence on imported oil;

—Promotion of cooperative relations with oil-producing countries and with other oil-consuming countries.

Member countries initially participating in the work of the agency are: Austria, Belgium, Canada, Denmark, Germany, Ireland, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

Membership in the agency is open to all OECD member countries able and willing to comply with the obligations of the program.

In adopting the decision establishing the agency, the Council expressed its determination to continue and, where appropriate, to strengthen the cooperation of all member countries in the field of energy and all related matters.

The governing board of the new agency will hold its first meeting at OECD headquarters on the 18th of November 1974, when the International Energy Program will be officially adopted.

Adoption of International Energy Program

Statement released by the Governing Board of the IEA following its first meeting in Paris, November 18, 1974.

The energy crisis has clearly shown the need for international cooperation in this field. The agreement relating to an International Energy Program is accordingly the outcome of a joint endeavor to further cooperation among the Organization for Eco-

nomic Cooperation and Development (OECD) countries. It is an act to promote closer relations and solidarity, from which any notion of antagonism or confrontation directed at any quarter is absolutely excluded.

The coordinating group set up by the February 1974 Washington conference has met on a number of occasions; last September it submitted a program of action to the other OECD countries and completed its work. The following countries signed the agreement on November 18: Austria, Belgium, Canada, Denmark, Germany, Ireland, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

In order to meet the aims which the participating countries have set for themselves, this cooperation has to fulfill at least two imperative requirements:

—It must make it possible at any time to have a "horizontal" view of energy questions in all their aspects, whether technological, scientific, commercial, monetary, financial, or political;

—It must incorporate operational arrangements capable of providing a framework for cooperation and of rapidly being put in motion on the basis of efficient decisionmaking machinery.

These two principles should be the foundation for the agency's operation.

The signatory countries have expressed the wish that the agency appointed to carry out the program should be a body of the OECD, an organization to which they belong and in which they have been cooperating for a number of years.

Under the proposed arrangements, namely the establishment of the agency as an autonomous body within the framework of the organization, two aims can be reconciled: the necessary political impetus and efficiency of the work can be maintained, while on the other hand the fund of knowledge and the logistic resources of an experienced organization can be drawn upon. The agency is not intended to take the place of existing organizations.

In addition, the fact of not setting up an entirely new international organization confirms the desire of the signatory countries not to build a system of confrontation vis-a-vis any quarter, but on the contrary to contribute to a new system of international cooperation.

From the outset, the participants have shown special interest in the problem of cooperation with oil-producing countries and with other oil-consuming countries; its aims in this regard are confirmed in article 44 of the agreement. The signatory countries wish this cooperation to be one of the new agency's main activities. The governing board will be helped in this task by a standing group.

In the matter of long-term cooperation, one of the fundamental problems is lesser dependence by the signatory countries in the future on the use of oil.

The expression, "long-term cooperation," must not be interpreted in a dilatory sense; on the contrary, the participating countries intend to undertake efforts forthwith, the effects of which will become evident in the medium or long term. Article 43 of the agreement moreover fixes a deadline for the decision which the governing board is to take on the proposals made to it.

The field of action of the standing group on long-term cooperation is particularly vast since, in addition to research and development in 10 priority areas, it includes rational use of energy, uranium enrichment, and the development of alternative sources of energy, while not forgetting protection of the environment.

In addition to these activities, the intention of the signatory countries was, as it were, to take out insurance in regard to possible difficulties of supply. They have accordingly established a program of emergency measures, including a system of oil sharing in an emergency, which system must be precise and strict in view of the difficulties that might arise. Because of the subject matter chapters I to IV are particularly detailed, but it would be a mistake to infer from this that they are of a more fundamental nature than the others, or even that they constitute the essential part of the program.

In the event of an emergency, the purpose

of the scheme is to solve member countries' difficulties; in so doing the signatory countries will take into consideration the needs of other countries. Article 11 of the agreement sets out the objectives of the program.

Chapters V and VI of the agreement contain provisions regarding the cooperation of the oil companies. These provisions go beyond what is required in an emergency, since they aim to establish within the agency a permanent framework for consultation and an information system which will include a general section on structures and the activities of companies, and on costs and prices.

The recent meeting between representatives of the coordinating group and the major oil companies constituted a good start for future work.

The agreement is open to all OECD countries wishing to join which are able and willing to meet its requirements. The agreement is also open to the European Communities, and it is stated that it cannot in any way impede the implementation of the treaties establishing those communities.

Norway has not become a party to the agreement, although it shares the views of the signatory countries on the need for cooperation and solidarity in energy matters. It has suggested it should explore with the agency the possibility of entering into an agreement with the latter. The governing board will examine this proposal.

Strategy of Consumer Cooperation in IEA

Excerpt from a statement by Thomas O. Enders, Assistant Secretary for Economic and Business Affairs, before the Senate Committee on Interior and Insular Affairs, February 13, 1975.

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Over the past year, the central objective of our international energy policy has been the development of a comprehensive framework for consumer country cooperation. These efforts had their formal beginning with the Washington Energy Conference in February 1974 and continued through the work of the Energy Coordinating Group set up at the time of the Washington Conference. This group of 12 nations (the United Kingdom, the Federal Republic of Germany, Italy, the Netherlands, Belgium, Luxembourg, Denmark, Ireland, Norway, Canada, Japan, and the United States) undertook to develop a cooperative international action program to deal with the world energy situation.

The result was the establishment, last November, of the International Energy Agency under OECD [Organization for Economic Cooperation and Development] auspices.[1] The Agency initially had 16 participating countries: Belgium, the Netherlands, Luxembourg, Germany, Italy, Denmark, Ireland, the United Kingdom, Spain, Sweden, Switzerland, Austria, Turkey, Canada, the United States, and Japan. In the period since its formation, New Zealand has also become a member and Norway has become an associate member.

Throughout the negotiations which led to the formation of the IEA, we pressed for a common and comprehensive approach by consumer countries to energy problems. From the outset the United States has believed that only through such an approach can we hope to solve the world energy crisis. Last year's oil embargo and the subsequent sudden massive increase of oil prices clearly demonstrated the high cost of an uncoordinated approach by consumer countries to their growing dependence on imported oil. Evidence of this cost was visible in the scramble for oil at any price, in the serious economic disruption in importing countries, and in the threat to the political, economic,

[1] The Agreement on an International Energy Program was signed at Paris on Nov. 18, 1974.

and security cohesion of the industrialized countries. Indeed, the independence of political decision of the industrialized democracies was put under a shadow by the oil embargo. It became clear that if that independence, and the integrity of the political, economic, and social systems of the West, are to be maintained, the energy crisis and the threat of future oil embargoes had to be dealt with by the cooperative action of the industrialized democracies.

In order to avoid a recurrence of the unacceptable costs of the oil embargo, we and our partners set as our first objective the development of a capability to deal with future supply interruptions in a cooperative framework. The emergency program which has emerged from these negotiations provides us with a safety net which would be in place should a supply emergency develop in the future. We and our partners have also agreed on the need to develop a long-term program to reduce the dependence of the industrialized democracies on imported oil through joint programs and efforts in the fields of conservation and the development of alternative energy supplies.

In addition to these efforts, which are part of the International Energy Program adopted by the International Energy Agency, the major industrial countries have also decided to create a financial safety net in the form of a $25 billion solidarity fund for mutual support in financial crisis.

Together, the International Energy Program of the IEA and the financial solidarity fund represent the first concrete steps in the development of the cooperative consumer approach to energy crisis issues which the United States has sought from the outset. In an energy picture which is largely grim, these vital initiatives reassuringly stand out. The security and well-being of the people of the United States require that these initiatives be implemented and developed to their full potential.

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Accelerated Development of New Energy Sources

Excerpts from a statement by Thomas O. Enders, Assistant Secretary for Economic and Business Affairs, before the Subcommittees on International Organizations and on International Resources, Food, and Energy of the House Committee on International Relations, March 26, 1975.

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Alternative Energy Development

On March 20, 1975, the IEA Governing Board confirmed a preliminary understanding of the major elements and basic principles of a coordinated system of cooperation in the accelerated development of new sources of energy. This is an essential part of our overall cooperative effort. Energy conservation can play a critical role in limiting our dependence on imported oil, especially over the next few years. But over the longer term, we must develop new sources of energy if we are both to achieve our reduced import dependence objectives and also to sustain a satisfactory rate of economic growth. In addition, the development of new sources of energy is essential to the creation of supply-and-demand conditions which will eventually force a reduction in the world oil price.

Higher oil prices will by themselves bring about important investments in new energy supplies. But the magnitude of the problem is so great that we cannot rely on market forces alone. Governments must act to reinforce and stimulate these market forces if we are to reduce our import dependence and our vulnerability to embargoes and arbitrary price increases.

The preliminary agreement reached in the IEA on a coordinated system of cooperation in the accelerated development of new energy is explicit recognition of this need for govern-

mental action. The coordinated system would consist of three interlinked elements:

—An agreement to encourage and safeguard investment in the bulk of conventional energy sources through the establishment of a common minimum price below which we would not allow imported oil to be sold within our economies;

—A framework of cooperation to provide specific incentives to investment in higher cost energy on a project-by-project basis; and

—Cooperation in energy research and development, including the pooling of national programs in selected projects.

Common Minimum Price for Imported Oil

The first element of this system, agreement on a minimum safeguarded price, is designed to resolve the critical dilemma which we face in the development of new energy sources. As I mentioned previously, the IEA countries have substantial new energy sources which can be developed. However, most of these, such as outer continental shelf oil, Alaskan oil, coal, et cetera, are relatively high cost. Moreover, their development will require enormous capital investments. The OPEC [Organization of Petroleum Exporting Countries] cartel, with production costs averaging some 25 cents per barrel, would clearly have the capability to undercut the development of these alternative sources at will. Thus, unless we provide some level of protection to domestic investors against possible competition from very low-cost imported oil, we risk a shortfall in the investment needed to meet our reduced dependence objectives. Further analysis will be required before this minimum level of price is set. It would be substantially below current world oil prices, although higher than prices prevailing before October 1973.

It is equally important to underline what this minimum import-price agreement will not provide. It will not be a price guarantee for OPEC; rather, it would be a guarantee of minimum protection for domestic investors in IEA countries. Also, it will not provide a floor price for all energy sold domestically; it would apply only to imported oil.

Why is this proposed commitment to a common minimum price for imported oil in the U.S. interest? First, as I have explained, it will help to assure that we get the investment needed in new energy to bring about over the medium term a sharp shift in the world supply-and-demand balance for oil. Only by making an unequivocal commitment to the accelerated development of alternative sources can we gain sufficient power in the marketplace to assure that OPEC will not be able to arbitrarily manipulate oil prices in the future.

At the same time it will help to equalize energy costs among the industrialized countries. Without an agreement of this type, the United States, which will make a major commitment to the development of relatively expensive energy, would find itself at a competitive disadvantage when the world oil price breaks and the other industrialized countries have the opportunity to import very low-cost oil.

This system of a minimum import price has several advantages over possible alternative schemes to encourage and protect investment in conventional energy sources such as a deficiency-payments mechanism. A deficiency-payments system would impose a massive financial burden on the taxpayer when world oil prices dropped and, by allowing lower prices, would stimulate consumption and imports. In contrast, the minimum safeguarded price mechanism would not only provide protection for new investment and a check on consumption but would also generate additional tax revenues when the world oil price declined.

At this point we are not inclined to try to dictate the policy mechanism which IEA countries might use to fulfill this commitment. We would propose that countries be left free to use a variable levy, import quotas, or other appropriate mechanisms.

Joint Undertakings and R. & D. Projects

The second basic element of the accelerated development system would promote, on a project-by-project basis, joint undertakings in higher cost energy projects. The development of synthetic fuels and other major

energy projects, perhaps including some of a conventional nature, would be fostered under this program. This measure would deal with projects involving large capital and developmental expenditures and would provide IEA countries with the opportunity to participate in each other's programs under agreed rules covering investment, access to technology, and access to production.

The third tier of the system is designed to encourage cooperative projects in research and development on energy. The IEA would assist in identifying and establishing joint R. & D. projects on which countries would pool national efforts. By definition, projects in this third tier would involve expenditures which are not likely to yield immediate returns but which offer significant potential for longrun cost savings or energy breakthroughs. Under this approach we can avoid duplication of effort and rationalize our spending.

Mr. Chairman, the coordinated system for accelerated development should be viewed in its entirety. It is designed to provide a balance of advantage between those countries with huge potential to develop indigenous energy supplies and those which will continue to have to rely on imported oil to meet a substantial portion of their energy requirements.

All consuming countries stand to benefit directly from the development of new energy in other consuming countries. These new energy supplies will impact directly on world supply and demand for OPEC oil and will contribute to the eventual decline in world oil prices. Thus we all have much to gain from cooperation which stimulates the development of new energy.

We will continue to consult closely with the Congress over the coming months on the elaboration of this preliminary understanding. Its implementation would of course require legislative authority in each country. The Administration has already requested legislation, title IX of the Energy Independence Act of 1975, which would provide such implementing authority. We will seek further consultations with the Congress on the manner in which such authority could be granted and used.

Mr. Chairman, we have had many opportunities for false comfort since the oil crisis began: A surplus of oil in the international market last summer because of seasonal factors and price resistance, some signs of undercover price cutting, and pronouncements that the oil cartel was about to break.

But, Mr. Chairman, the oil crisis will not simply go away. We must act to defuse it by bringing our own consumption of oil under control, by developing our own energy supplies, and by encouraging other consuming countries to do likewise. Only in this way can we achieve our two essential objectives: A significant decrease in the international price of oil and substantial U.S. self-sufficiency in energy.

U.S. Statement at IEA Ministerial Meeting

Statement by Secretary Kissinger before the Ministerial Meeting of the IEA in Paris, May 27, 1975.

Today we begin a week of deliberation on the central problems of the industrial democracies: energy, economic prosperity, the building of a constructive relationship with the developing nations, and insuring the security of our own countries.

Of these, no issue is more basic to the future than the challenge of energy. The fundamental achievements of our economies, and the modern civilization they sustain, have been built upon the ready availability of energy at reasonable prices.

The energy crisis of 1973 first brought home to us the full implications of the new reality of global interdependence. Energy stands as the first and most fundamental of

these new problems; its magnitude compels us to cooperation. Without that cooperation, we risk a return to nationalistic rivalry and economic decline comparable to the bitter experience of the thirties. Now all nations—rich and poor, industrialized and developing—must decide whether growing interdependence will foster common progress or common disaster.

Our objective must be to construct a world energy system capable of providing, on terms fair to all, the fuels needed to continue and extend the progress of our economies and our societies. The path that the members of this Agency have chosen begins witn consumer solidarity. But a durable international system must ultimately encompass, and be built by, both the consumers and the producers of the world's energy.

This Agency has made remarkable progress since the Washington Energy Conference 15 months ago. We recognized at Washington that the energy crisis was the most severe challenge to industrial civilization since the Second World War. For a generation North America, Europe, and Japan increasingly allowed oil imports to replace their own energy production. In 1950 the industrialized world imported 5 percent of its requirements. In 1960, this had grown to 17 percent; by 1972, it had reached 39 percent.

The embargo and price rises of 1973 taught us how vulnerable we had become. We saw that neither the supply nor the price of a central factor in our economies was any longer under our control. Our well-being and progress had become hostage to decisions in which we could not take part. At the Washington Energy Conference we recognized that only collective action could reduce our excessive dependence on imported oil and restore to our governments mastery over our own economies and foreign policies. Separately we could never create conditions for lower oil prices. Nor could any one of us, except at exorbitant cost, defend against a new embargo. Our security, our economic growth, our role in the world, were at risk.

Nothing so vividly demonstrates the cooperative vitality of the industrial democracies as the speed and imagination with which this Agency acted on these conclusions. It articulated a realistic strategy for attacking the problems of price and supply and launched a series of major steps which together make up the elements of a comprehensive program:

—To safeguard against future energy emergencies, we committed ourselves to build stocks of oil and, in the event of an embargo, to cut our consumption by an equal percentage and to share available oil.

—For financial solidarity, the nations comprising the OECD agreed on a fund of $25 billion to protect against financial disruption from oil deficits or from arbitrary shifts of funds by the producers.

—To prevent an increase in our vulnerability over the next few years, we set conservation goals and agreed on procedures to verify their implementation.

—To lessen our long-term vulnerability, we agreed on an ambitious policy to develop new energy sources through cooperation on individual development projects and safeguarded by a minimum price mechanism.

—To develop the technology to achieve independence by the end of the century, we established a far-reaching program of cooperation in energy research and development.

—Finally, we recognized the reality of the new economic and political conditions in which we are acting. Over the long term, a stable world energy economy must have the support and serve the interests of both consumers and producers. Therefore we in this Agency have committed ourselves to seek a long-term cooperative economic relationship with the energy-producing nations. This Agency has been the principal forum for our preparation for the dialogue with the producers.

In the short term, our objective in this Agency has been to restore the balance in the international energy market. Through rigorous conservation and the development of alternative sources, we have sought to create such a surplus of capacity that the flexibility of decision of the producers will be reduced. As our conservation policies

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gain momentum, our dependence on imported oil can at least be kept constant, while our economies recover from the recent recession. As the proportion of our energy needs from our own production increases, the producers' market will begin to shrink, first relatively and then in absolute terms. The producers will have to distribute ever-larger cutbacks among themselves to maintain the high prices, and even larger cutbacks to support an increase. Individual producers, especially those with ambitious development, defense, and other spending programs, will be under pressure to increase sales or at least to refuse further production cuts. Thus at some point, if this process succeeds, the cartel will have lost the exclusive and arbitrary control over prices.

We acknowledged from the start that our countries vary widely in energy needs and potential. Some of us have major and as yet untapped oil, gas, and coal reserves. Others must rely almost entirely on nuclear energy and new technology to reduce national dependence on imported oil.

This very diversity gives a strong impetus to our cooperation. Because of our interdependence, we all have an interest in each other's success. The action each country takes to reduce its vulnerability reduces the vulnerability of us all. And the decision to work cooperatively assures an equitable sharing of costs and benefits. The sacrifices of one country will not simply be offset by the failure of other nations.

All elements of our strategy are linked. Plans to deal with an emergency will prove empty if we permit our dependence on imported oil to mount year by year. Efforts to develop a new relationship with the producers will be thwarted if we fail to create the objective conditions for a new equilibrium through programs of conservation and the development of alternative supplies.

Many of the basic building blocks of our strategy are in place. But much remains to be done. This first ministerial meeting of the IEA faces the following urgent tasks:

—To impose determined conservation programs before our economies begin to expand again;

—To put into effect strong new incentives for developing alternative sources;

—To accelerate research on long-term development of nonconventional energy supplies; and

—To prepare thoroughly for a dialogue with the producers.

Let me deal with each of these in turn.

The cardinal objective of any energy program must be the limitation of growth of consumption. However much we augment our own energy production, in the medium term it cannot keep pace with the extravagant annual consumption increases of the 1960's.

Conservation will be particularly important over the next few years. Until North Sea and Alaskan oil and additional coal and nuclear power become available in quantity, it is the only means we have to limit our vulnerability.

In February, we agreed that the IEA countries should save 2 million barrels a day by the end of this year. The recession has put us ahead of that target. But the reduction in consumption caused by the recession has also led to complacency about the need for a strong conservation policy. This has delayed—in America and elsewhere—the imposition of conservation measures that will assure us of future savings.

We must recognize that most of our current savings result not from policy decisions but from the reduction in overall economic activity caused by the recession. During this spring's decline in demand for oil, the oil producers have absorbed the production cuts required to keep supply in line with demand, leaving the basic price structure intact. Price rises have been difficult. But as growth resumes in the industrial economies, and with a normal or cold winter, our demand for oil will inevitably increase.

Unless we convert our recession-induced conservation to policy-induced conservation, the producers will benefit from a stronger market. We will become increasingly vulnerable to price rises and the political manipulation of energy supply. Indeed, we have already been warned of new price increases.

These would be economically unjustified, for there is much surplus production capacity, inflation is slowing, and oil prices are already at historic highs. Yet the market remains under the substantial control of the producers; it will become more so unless we impose upon ourselves a rigorous energy program and put immediate impetus behind our conservation efforts.

In January, President Ford set a goal for the United States of saving 2 million barrels a day by the end of 1977. Later today, the President will announce additional measures to discourage the consumption of imported oil.

Together with actions already taken, this will bring the total estimated U.S. savings to 1.2 million barrels a day by the end of 1977. The President hopes that the Congress will join him in common action to bring about the remaining savings needed to meet our goal of 2 million barrels. But should this not prove possible, he is prepared to use the powers available to him to assure that the United States does its part in the common conservation effort.

We believe it essential that the IEA develop conservation goals which will prevent our vulnerability from increasing during 1976 and 1977. Because the United States is responsible for half the total oil consumption of IEA members, it pledges itself to half the savings. If, together, we can save 4 million barrels a day by the end of 1977, we can prevent our collective imports of oil from increasing above present levels even after a period of economic growth. OPEC's [Organization of Petroleum Exporting Countries] ability to raise prices arbitrarily will have been diminished. And we will have reduced our oil payments deficit by many billions of dollars. But should we fail, the cost will be not only higher prices but also increasing economic and political vulnerability.

Alternative Sources

Over the longer term, our dependence on imported oil will become irreversible unless we rapidly develop new energy sources—oil, gas, coal, nuclear power. This is all the more urgent because the economic costs of the current level of high prices will multiply over time. At present, much of the producers' surplus revenues are recycled into investments in the industrialized countries. This is welcome as a short-term alleviation of the balance-of-payments drain. But, if current prices hold, sooner or later the imports of producers will rise dramatically. There will occur an increasing drain of goods and services from our economies.

If we are to lessen our vulnerability, energy production from alternative sources must, at a minimum, substantially reduce current IEA imports of 25 million barrels per day. Three actions are needed to accomplish this:

—We must remove or modify many of our governmental constraints on energy production. Energy development is encumbered everywhere by legal, environmental, and regulatory limitations. Many of these reflect valid social goals; others could usefully be reviewed or modified, or alternative safeguards could be devised. We should use this organization as a clearinghouse for ideas to remove unnecessary obstacles to alternative energy sources.

—We must make sure that sufficient financing is available to assure energy development. Enormous amounts of capital will be required—perhaps a thousand billion dollars in the next 10 years. Each country should decide the arrangements best suited to meet this requirement, but we should proceed now to establish an IEA framework for project-by-project cooperation, including joint guarantees or other financial assistance to large cooperative projects.

—We must insure that our energy investments are protected against disruptive competition. For much of the Persian Gulf, production costs are only about 25 cents a barrel. Most of the major continental energy sources—new Alaskan North Slope oil, the U.S. outer continental shelf, North Sea oil, nuclear power everywhere—will be many times more costly to produce. If the cartel decides to undercut alternative sources by temporary, predatory price-cutting, invest-

ment in alternative sources may be inhibited or abandoned. The producers' pricing policies could thus keep us in a permanent state of dependence, and we would hardly have assurance that the price would not be raised again once our dependence was confirmed.

This is why we in the IEA have agreed in principle on the safeguard price mechanism. Only if consumers develop massive new energy sources will the oil producers lose their ability to set prices at high, artificial levels. But these sources will not be developed if producers retain the ability to thwart our energy programs by temporary, predatory price cuts. A minimum safeguard price—well below the current world price level—can help insure that these alternative sources will be developed.

We are obviously not proposing a guaranteed price for OPEC. On the contrary, if our policy succeeds, and as large quantities of new energy become available, OPEC's selling price could fall below the protected level. The minimum safeguard price can be implemented in a variety of ways—through tariffs, quotas, or variable levies. The difference between the world price and the higher domestic price would thus accrue to our governments in the form of import taxes and levies. These could be used for social programs or rebates or other national programs of our own choosing. In short, the minimum safeguard price is not a device for maintaining artificially high world oil prices. On the contrary, it is a device for making sure that they come down. And it can be designed to yield the benefits from such reduction to the industrial countries.

The agreed deadline for elaboration of the IEA overall alternative sources program is July 1. We must meet it. President Ford has asked me to emphasize the urgency of this task. Without clear incentives for major new energy investments rapidly put into place, IEA countries can never hope to reduce their current excessive vulnerability.

Nuclear Power for Energy Production

In the quest for greater energy self-reliance, nuclear power will be critical. By 1985, the European Community hopes that nuclear power will generate about one-quarter of its electricity; Japan, a third; the United States, perhaps a third. But there are major problems associated with the orderly, safe, and prudent introduction of this important new technology.

In all our countries, the growth of nuclear power produces both hope and anxiety. On the one hand, we recognize it as the only potential large-scale energy substitute for the inevitable exhaustion of supplies of oil and gas which would occur by the end of this century. On the other hand, there are increasing doubts that sufficient nuclear fuel will become available. Enormous amounts of capital will be needed to build reactors, severely straining existing capital markets. And we all know of the questions raised by the public and some legislators regarding the environmental impact of the widespread construction of nuclear facilities.

Thus we must move urgently and decisively within the IEA on the following program:

—We must insure that needed uranium enrichment facilities are constructed on schedule. In this regard, the United States recognizes its responsibility to continue providing nuclear fuel under long-term contract. Our policy is to bring into being—preferably by private industry but by the Federal Government if necessary—additional enrichment capacity which will insure adequate future supply. Negotiations are now underway with a potential private source. These discussions will proceed quickly, and by June 30, the President will decide which course of action, private or public, is in the best interests of our own country and those abroad who rely on us. We will then be in a position to accept long-term orders.

—We must intensify our joint efforts to map and analyze future demand and supply of fuel, including assessing the availability of uranium resources.

—We should jointly project the capital requirements of the nuclear sector for the next 10 years and consider how our governments, individually and cooperatively, can assist in meeting those requirements.

—We should evaluate the economic neces-

sity, plant requirements, and safety implications of plutonium reprocessing, recycling, and storage.

—We must undertake intensive efforts to improve the safety and security of nuclear materials, equipment, and operation.

—And finally, we should develop balanced information programs to bring perceptions of the risks and benefits of nuclear energy in line with reality.

Several of the technical issues involved are already being dealt with by the OECD's Nuclear Energy Agency. That work should of course continue.

Research and Development

Beyond the next decade, a central issue will be how to create new nonconventional energy sources. It is in developing these new sources that IEA's program of cooperation may make its most important and lasting contribution.

For the long-range energy future depends not on the Persian Gulf, or the North Sea, or Alaska. It does depend on what we do in our laboratories to make better use of conventional newer sources and to develop more exotic sources.

The advanced nations have vast scientific and technical capabilities. Over the past year and a half, IEA member countries have expanded their national programs in energy research and development. In the United States our new Energy Research and Development Administration will spend more than $2 billion in the fiscal year beginning next month. American industry will invest far more than that.

The U.S. program emphasizes improving the efficiency of energy generation, transportation, and use; improving the recovery of oil and new uses of coal; and converting coal to synthetic oil and gas. These projects are designed to produce major advances in energy production and use in this century. For the period beyond the year 2000, only three known potential sources of energy have virtually infinite potential for expansion: the breeder reactor, nuclear fusion, and solar energy. These all have a high priority in the U.S. program.

The IEA program in these fields reflects the conviction that technical advance will be accelerated through cooperative efforts and facilitate the flow of information and knowledge. We have decided to link our national programs through coordinated planning, intensified information exchange, and through joint projects which pool our capital, industrial skills, and technology.

The early results are promising. We have moved forward rapidly on nine joint projects ranging from energy conservation to nuclear power. Important programs in coal processing, which involve substantial joint investments of money and manpower, are about to begin.

But a sustained program of cooperation requires much more. We have identified the existing and potential technologies that will have a critical impact on the future. We must now ascertain when these technologies can be implemented, what their production potential is, and which are best suited to large-scale joint projects.

As our cooperation expands, projects will increasingly operate at the frontier of technology. We will each have to recognize that we cannot retain the most promising projects solely for our own national purposes. We must establish guidelines which, while taking account of understandable concern over the sharing of information and the possible loss of commercial advantage, give impetus to multilateral cooperation.

Therefore, I propose that our leading research and development officials meet in early autumn at the special session of the Governing Board. Their goal would be to complete the design of a joint energy research and development program that will receive high priority in all of our national planning.

Relations With Producers

The final element of our energy strategy is the development of a cooperative relationship with producers. We must face the fact that the producers have the ability now and for some time to come to determine the sup-

ply and the price of our oil. But the decisions we make now on conservation and alternative sources will determine whether in the future prices will be set by political decision or economic competition.

Yet there exists no institution or agreed framework in which the exercise of the undoubted powers of both groups can be subject to discussion and mutual accommodation.

Since its start, IEA has been committed to the search for a new relationship with the producers which would take into account the needs and aspirations of both sides. The solidarity we have achieved in IEA is a necessary condition for building that broader structure.

Before the recent preparatory conference between producers and consumers, the IEA agreed on several possible areas for joint action by producers and consumers. These remain fruitful topics for dialogue:

—First, we should discuss the management of financial recycling. Both producers and consumers have an interest in the effective reinvestment of surplus funds.

—Second, we should jointly examine the incoming-investment policies of the industrialized countries. The oil producers need attractive outlets for their revenues; the industrial countries, while they welcome new investment, will want to retain control of those sectors of their economies which they consider critical.

—Third, we can examine cooperative efforts to accelerate the development programs in producer countries. New industries can be established, combining the technology of the industrialized world with the energy and capital of the producers. Fertilizer is a promising example.

—Fourth, the oil-producing countries and the industrial consuming countries share responsibility for easing the plight of the poorest nations. International development efforts have been undermined by the current economic crisis; high prices for energy have shattered the hopes of developing nations for industrialization; high petrochemical costs have made needed fertilizer prohibitively expensive and compounded the difficulties of producing enough food to feed the hungry. Special efforts must be made on behalf of those most seriously affected. The newly rich producing nations have an obligation to join us in this effort.

—And finally, there is an obvious need for a forum in which producers and consumers can discuss the difficult issues of oil prices and security of supply. This dialogue is not, of course, a substitute for our own efforts on conservation and the development of new supplies. But while we cannot protect these vital interests only by discussions with producers, both consumers and producers can benefit from a serious dialogue regarding their respective interests and objectives.

It has become clear—as a result of the April preparatory meeting—that the dialogue between the producers and consumers will not progress unless it is broadened to include the general issue of the relationship between developing and developed countries.

We in the IEA have no reason to recoil from a discussion of all the issues of concern to developing countries. I recently set forth my country's ideas on raw materials and commodities problems; I proposed that these now be addressed in the multilateral trade negotiations, in individual commodity groups, and in the World Bank. I shall put forward further proposals at the OECD tomorrow. I hope that these ideas as well as proposals put forward by others can help overcome the impasse in the producer-consumer dialogue.

The United States is prepared to have the preparatory meeting reconvene in Paris in the same format as before. In order to carry its work forward, commissions should be created to deal with critical areas such as energy, problems of the most seriously affected nations, and raw materials. Each commission would review the range of issues under its heading: finance, investment, trade, production. The commissions could meet consecutively or simultaneously, but without an arbitrary deadline for concluding their work. The commissions on raw materials and the problems of the most seriously affected nations would not supplant the already substantial work which is being done

elsewhere. Rather, they would monitor, supplement, and orient that work and give it needed impetus.

Membership in these commissions should be limited if they are to be effective. We suggest that this be decided by objective criteria. In energy, for example, countries exporting or importing more than a certain volume of energy in the world market should be members. On the commission dealing with the most seriously affected countries, those with the lowest per capita income would participate along with traditional and new aid donors. The commission on commodities could include the principal exporters and importers of food and non-oil raw materials.

We suggest that the IEA discuss these concepts and coordinate our contacts with the countries that attended the April meeting, and especially with France as the convening country, to determine when and how the preparatory meeting could be reassembled.

This Agency has already demonstrated what can be accomplished if nations have the vision to perceive their interest and the will to act upon it. We have set ourselves important goals including broadening the pattern of cooperation already established here. We are called upon to make concrete progress; this will require readiness to look beyond our own concerns as industrialized nations to the broader needs of all mankind.

The progress we have made in a short 15 months should give us great hope for the future. Goethe said that "The web of this world is woven of necessity and chance." We stand at a point where those strands intertwine. We must not regard necessity as capricious nor leave change to chance. Necessity impels us to where we are but summons us to choose where we go. Our interdependence will make us thrive together or decline together. We can drift, or we can decide. We have no excuse for failure. We have it in our power to build a better future.

Ministerial Meeting Communique

Communique of the Ministerial Meeting of the IEA in Paris, May 27, 1975.

The Governing Board of the International Energy Agency met at Ministerial level in Paris on 27th May, 1975, under the Chairmanship of Mr. Renaat van Elslande, Minister for Foreign Affairs of the Kingdom of Belgium.

1. Ministers noted that the events of recent years have highlighted the importance for the world economy of a regular and stable energy supply. Solutions to current economic problems must rest upon the principles of inter-dependence of all countries, mutual support and shared responsibility, so that all countries, whatever their level of development, may be recognised as partners in the world economic system. Their continued economic and social development must be based upon world economic growth in conditions of stability and equity.

Ministers reiterated their determination that the Agency should contribute, as far as problems connected with energy were concerned, towards achievement of these objectives.

2. Ministers reviewed developments in the world energy situation since the establishment of the Agency on 15th November, 1974. They laid down guidelines and priorities for the Agency's future work and for the full implementation of the International Energy Program [IEP] and re-affirmed their commitment to work for the development of a co-operative multilateral relationship among oil producing and oil consuming countries.

3. They noted with approval that an emergency system has now been established to reduce oil consumption and to allocate oil supplies in conditions of shortage. This emergency system can be brought into operation at short notice if required, and will substantially reduce the economic effects of any future oil supply difficulties. They noted the importance of emergency reserves to insure the effectiveness of the emergency system, and noted that the Governing Board would reach a decision by 1st July, 1975, as to the date by which these emergency reserves should be raised to 90 days supply.

4. Ministers noted the importance of the collection and analysis of information on the oil market in order to ensure greater understanding and transparency in international oil trade. They agreed that

the oil market information system should be promptly completed and evaluated.

5. Ministers confirmed their determination to begin the implementation of a programme on long-term co-operation on energy by 1st July, 1975, with a view to achieving the overall objectives of the Agency by making more efficient use of the world's limited available resources of energy in the interest of the world economy; by diversifying the sources of energy; and by reducing dependence on imported oil.

Ministers agreed that co-operation in the Long-Term Program, to be equitable and effective, should take into due consideration the specific economic and social conditions of Member countries. The program should ensure that the burdens and benefits deriving from joint efforts of participating countries are shared among them on an equitable basis, and that policies directed at achieving such a balance should be implemented within existing legislative and constitutional limitations. They further stressed that the overall efforts and undertakings of each participating country with respect to energy conservation, production of energy and research and development in the energy field should be regularly reviewed within the Agency.

6. Ministers noted with satisfaction the progress that has been made in the field of conservation, in particular through the adoption of a group conservation target for 1975.

Ministers decided that the work of the Agency should be actively continued, and agreed that governments of the participating countries would need to increase their efforts to ensure that the energy conservation objectives of the Agency are achieved.

Ministers laid down as priorities for future work:

—the consideration of conservation objectives for the group for 1976 and 1977;

—the establishment of medium-term goals for 1980 and 1985; and

—the intensification of individual country reviews to strengthen the effectiveness of conservation programmes.

7. The Ministers agreed on the need to elaborate a co-ordinated programme of co-operation for the accelerated development of alternative energy sources as provided in the decision already taken by the Governing Board, including in particular a commitment to increase, encourage and safeguard investment by general and specific measures.

The Ministers agreed that the Agency should initiate promptly an examination of the potential for expanded co-operation in the area of nuclear energy. This co-operation in all fields will be directed toward ensuring the development of this important alternative source of energy with due regard to safety and environmental conditions. Amongst other questions shall be discussed the availability of nuclear fuel and technology to meet the problems of safety and waste management.

On the basis of the above mentioned decision Ministers insisted on the importance of the establishment of co-operative projects in the research and development fields specified in the IEP Agreement, particularly coal and nuclear questions. In this connection, they agreed to build further upon the progress already achieved by the Agency in the area of energy research and development. They resolved that productive results in this area will require a sustained effort to develop concrete international co-operation. In support of this objective, they agreed that a special session of the Governing Board, with attendance by senior research and development officials, should be held in the Autumn of 1975 to complete the formulation of a research and development program.

8. Ministers reviewed the relations among oil producing and oil consuming countries, developing and developed alike. With this in view they were aware of important and pressing problems of the developing countries which are not directly related to energy, and they were determined that these should be tackled with political determination and within a reasonable time-frame. Ministers noted that the Council of the OECD meeting at Ministerial level on May 28th and 29th proposes to discuss the problems of development and of commodities, including foodstuffs, and expressed the hope that steps will be taken toward effective action for finding solutions to these problems. For its part, the Agency will do all within its competence to work for the solution of the problems of the developing countries, so far as they are concerned with energy.

Ministers noted that the Preparatory Meeting held in Paris from 7th–16th April, 1975, had provided an opportunity for full and serious discussion of the means of establishing closer relations among oil producing and oil consuming countries.

Ministers declared themselves ready to pursue discussions at any time and in any manner found mutually convenient, and reaffirmed their common willingness to continue the dialogue and to encourage initiatives directed towards further progress.

Ministers exchanged views on possible ways of pursuing the dialogue. They agreed to continue bilateral contacts with interested countries. They instructed their representatives in the Governing Board to address these questions as a matter of urgency, to co-ordinate their efforts to ensure that formal deliberations responsive to the interest of all countries concerned can be held as soon as possible, and to examine the manner in which the dialogue should be continued.

9. Ministers agreed that the work carried out in the Agency thus far has made an important contribution towards meeting the difficulties that have been encountered in the energy field. They stressed

the importance of the solidarity among the Member countries, and emphasised the need for an intensification and, wherever possible, a broadening of co-operative efforts undertaken in this area. Acting in its operational capacity, the Agency will continue to develop further its co-operative energy programme in order to improve the overall energy supply and demand situation, which is of vital importance to the further development of the world economy as a whole.

Secretary Kissinger Summarizes Results of Ministerial Meeting

Excerpt from Secretary Kissinger's remarks to a news conference in Paris, May 27, 1975.

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. . . We consider the progress that has been made in energy cooperation among the members of the IEA one of the most significant achievements of the recent period. It symbolizes the ability of the industrial democracies to work together on a common problem. They have laid a foundation of major accomplishment in a very brief period of time since the Washington Energy Conference of February 1974.

The meeting today and the American position at that meeting was designed to take stock of what has been achieved and to chart the course for the future. It outlined the American proposals—outlined the objectives in the field of conservation, the development of alternative sources, the emphasis on nuclear power, the joint efforts in research and development that we believe can be undertaken by the IEA in the immediate future and that must be undertaken if the objective conditions that produced the energy crisis are to be alleviated and, over a period of time, eliminated.

We believe that these objectives are within our capacity to achieve. An important aspect of our view and that of our colleagues in the IEA has to do with producer-consumer relations, and this has to be seen in the context of what we shall do at the OECD tomorrow, mainly to sketch a new and, we hope, constructive approach to the relationship between the industrialized countries and the developing countries.

With respect to the consumer-producer dialogue, we have proposed a means by which the stalemate of the last conference can hopefully be overcome, by which it is possible to have discussions on energy which take place concurrently with discussions on raw materials and development in probably different forums that are related to each other but where each works on its own schedule.

Together with the specific proposals that we have made with respect to raw materials previously and that we shall elaborate tomorrow, we hope that the possibility has been created for a constructive dialogue between consumers and producers on energy and between industrialized and developing countries on a local basis. This is the approach that the United States is putting forward, which we believe has the substantial support of our partners, and it offers hope for progress in the field of energy and, we hope, for a constructive dialogue with the developing countries.

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Consumer Cooperation

Secretary Kissinger's Chicago Speech

Excerpts from Secretary Kissinger's address, "The Energy Crisis: Strategy for Cooperative Action," delivered in Chicago, November 14, 1974.

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Consumer cooperation has been the central element of U.S. policy for the past year and a half.

In April 1973 the United States warned that energy was becoming a problem of unprecedented proportions and that collaboration among the nations of the West and Japan was essential. In December of the same year, we proposed a program of collective action. This led to the Washington Energy Conference in February 1974, at which the major consumers established new machinery for consultation with a mandate to create, as soon as possible, institutions for the pooling of effort, risk, and technology.

In April 1974 and then again this fall before the U.N. General Assembly, President Ford and I reiterated the American philosophy that global cooperation offered the only long-term solution and that our efforts with fellow consumers were designed to pave the way for constructive dialogue with the producers. In September 1974 we convened a meeting of the Foreign and Finance Ministers of the United Kingdom, Japan, the Federal Republic of Germany, France, and the United States to consider further measures of consumer cooperation. And last month President Ford announced a long-term national policy of conservation and development to reinforce our international efforts to meet the energy challenge.

In our view, a concerted consumer strategy has two basic elements:

—First, we must create the objective conditions necessary to bring about lower oil prices. Since the industrialized nations are the principal consumers, their actions can have a decisive impact. Determined national action, reinforced by collective efforts, can transform the market by reducing our consumption of oil and accelerating development of new sources of energy. Over time this will create a powerful pressure on prices.

—Second, in the interim we must protect the vitality of our economies. Effective action on conservation will require months; development of alternative sources will take years. In the meantime, we will face two great dangers. One is the threat of a new embargo. The other is that our financial system may be unable to manage chronic deficits and to recycle the huge flows of oil dollars that producers will invest each year in our economies. A financial collapse—or the threat of it—somewhere in the system could result in restrictive monetary, fiscal, and trade measures and a downward spiral of income and jobs.

The consumers have taken two major steps to safeguard themselves against these

dangers by collaborative action.

One of the results of the Washington Energy Conference was a new permanent institution for consumer energy cooperation —the International Energy Agency (IEA). This agency will oversee a comprehensive common effort—in conservation, cooperative research and development, broad new action in nuclear enrichment, investment in new energy supplies, and the elaboration of consumer positions for the consumer-producer dialogue.

Equally significant is the unprecedented agreement to share oil supplies among principal consumers in the event of another crisis. The International Energy Program that grew out of the Washington Energy Conference and that we shall formally adopt next week is a historic step toward consumer solidarity. It provides a detailed blueprint for common action should either a general or selective embargo occur. It is a defensive arrangement, not a challenge to producers. But producing countries must know that it expresses the determination of the consumers to shape their own future and not to remain vulnerable to outside pressures.

The International Energy Agency and the International Energy Program are the first fruits of our efforts. But they are only foundations. We must now bring our blueprint to life.

To carry through the overall design, the consuming countries must act in five interrelated areas:

—First, we must accelerate our national programs of energy conservation, and we must coordinate them to insure their effectiveness.

—Second, we must press on with the development of new supplies of oil and alternative sources of energy.

—Third, we must strengthen economic security—to protect against oil emergencies and to safeguard the international financial system.

—Fourth, we must assist the poor nations whose hopes and efforts for progress have been cruelly blunted by the oil price rises of the past year.

—Fifth, on the basis of consumer solidarity we should enter a dialogue with the producers to establish a fair and durable long-term relationship.

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Let there be no doubt, the energy problem is soluble. It will overwhelm us only if we retreat from its reality. But there can be no solution without the collective efforts of the nations of North America, Western Europe, and Japan—the very nations whose cooperation over the course of more than two decades has brought prosperity and peace to the postwar world. Nor, in the last analysis, can there be a solution without a dialogue with the producers carried on in a spirit of reconciliation and compromise.

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Secretary Kissinger's Los Angeles Speech

Excerpts from Secretary Kissinger's address, "A New National Partnership," delivered in Los Angeles, January 24, 1975.

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Clearly, the energy crisis is the most pressing issue on the new agenda. In the American view, a permanent solution is possible based on the following principles.

The first imperative is solidarity among the major consumers. Alone, no consuming country, except possibly the United States, can defend itself against an oil embargo or a withdrawal of oil money. Alone, no country, except perhaps the United States, can invest enough to develop new energy sources for self-sufficiency. But if the United States acted alone, it would doom the other industrialized nations to economic stagnation and political weakness; this would soon undermine our own economic well-being. Only by collective action can the consuming countries

free their economies from excessive dependence on imported oil and their political life from a sense of impotence.

We have made important progress since the Washington Energy Conference met less than a year ago. Last November, the United States and 15 other countries signed an unprecedented agreement to assist each other in the event of a new oil emergency. That agreement commits each nation to build an emergency stock of oil; in case of a new embargo, each will cut its consumption by the same percentage and available oil will be shared. Thus, selective pressure would be blunted and an embargo against one would be an embargo against all.

Equally important, we have moved dramatically toward financial solidarity. Only last week, the major consuming nations agreed to create a solidarity fund of $25 billion, less than two months after it was first proposed by the United States. Through the creation of this fund, the industrial nations have gained significant protection against shifts, withdrawals, or cutoffs of funds from the petrodollar earners. The industrial countries will now be able to offset financial shifts of oil producer funds by loans to each other from the $25 billion mutual insurance fund. The United States considers this rapid and decisive decision for the creation of the solidarity fund to be of the greatest political and economic significance.

The second imperative is a major reduction in consumer dependence on imported oil. The safety nets of sharing and financial guarantees are important for the short term. But our long-term security requires a determined and concerted effort to reduce energy consumption—on the highways and in our homes, in the very style of our lives. Equally important will be a speedup in the development of alternative energy sources such as nuclear power, coal, oil shale, and the oil of the outer continental shelf, Alaska, the North Sea, and elsewhere.

Cooperative action among the consumer nations will reinforce our own efforts in this country. The International Energy Agency (IEA), created last year, and other countries acting in parallel with it, such as France, are responding to the crisis with substantial conservation programs of their own. And the United States will shortly propose to the IEA a large-scale collective program to develop alternative energy sources through price and other incentives to investors and through joint research and development.

Such policies will be costly and complex; some will be unpleasant and politically unpopular. But we face a choice: Either we act now, and decisively, to insure national self-sufficiency in energy by 1985, or we remain prey to economic disruption and to an increasing loss of control over our future. This, bluntly, is the meaning of President Ford's energy program which he laid before the Congress in his state of the Union message.

The third imperative is an eventual dialogue between consumers and producers. Ultimately the energy problem must be solved through cooperation between consumers and producers. The United States, as a matter of evident necessity, seeks such a dialogue in a spirit of good will and of conciliation. But just as the producers are free to concert and discuss among themselves, so too are the consumers.

A principal purpose of consumer cooperation will be to prepare substantive positions for a producer dialogue to insure that it will be fruitful. The consumer nations should neither petition nor threaten. They should be prepared to discuss the whole range of issues of interdependence: assured supplies, a fair return to the producers of a depleting resource, security of investment, the relationship between oil and the state of the world economy.

Over the long term, producers and consumers, developed and developing nations, all depend on the same global economic system for the realization of their aspirations. It is this system which is now in jeopardy, and therefore the well-being of all nations is threatened. We must—together and in a cooperative spirit—restore the vitality of the world economy in the interests of all mankind.

Though we are far from having overcome

the energy crisis, the outlines of a solution are discernible. The right course is clear, progress is being made, and success is well within our capacity. Indeed, the energy crisis which accelerated the economic difficulties of the industrial democracies can become the vehicle by which they reclaim control over their future and shape a more cooperative world.

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Secretary Kissinger's National Press Club Speech

Excerpts from Secretary Kissinger's address, "Energy: The Necessity of Decision," delivered in Washington, February 3, 1975.

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We and our partners in the International Energy Agency have been, for a year, pursuing strategy in three phases:

—The first phase is to protect against emergencies. We must be prepared to deter the use of oil or petrodollars as political weapons, and if that fails, we must have put ourselves in the best possible defensive position. To do this, we have established emergency sharing programs to cope with new embargoes and created new mechanisms to protect our financial institutions against disruption. This stage of our common strategy is well on the way to accomplishment.

—The second phase is to transform the market conditions for OPEC oil. If we act decisively to reduce our consumption of imported oil and develop alternative sources, pressure on prices will increase. Measures to achieve this objective are now before the International Energy Agency or national parliaments; we expect to reach important agreements on them before the end of March.

—Once the consumer nations have taken these essential steps to reduce their vulnerability, we will move to the third stage of our strategy: to meet with the producers to discuss an equitable price, market structure, and long-term economic relationship. Assuming the building blocks of consumer solidarity are in place, we look toward a preparatory meeting for a producer-consumer conference before the end of March.

Our actions in all these areas are interrelated. It is not possible to pick and choose; since they are mutually reinforcing, they are essential to each other. No emergency program can avail if each year the collective dependence on OPEC oil increases. New sources of energy, however vast the investment program, will be ineffective unless strict measures are taken to halt the runaway, wasteful growth in consumption. Unless the industrial nations demonstrate the political will to act effectively in *all* areas, the producers will be further tempted to take advantage of our vulnerability.

In recent months we and our partners have taken important steps to implement our overall strategy. Two safety nets against emergencies have been put in place. In November, the IEA established an unprecedented plan for mutual assistance in the event of a new embargo. Each participating nation is committed to build an emergency stock of oil. In case of embargo, each nation will cut its consumption by the same percentage, and available oil will be shared. An embargo against one will become an embargo against all.

And in January, the major industrial nations decided to create a $25 billion solidarity fund for mutual support in financial crises—less than two months after it was first proposed by the United States. This mutual insurance fund will furnish loans and guarantees to those hardest hit by payments deficits, thus safeguarding the international economy against shifts, withdrawals, or cutoffs of funds by the producers.

The next steps should be to accelerate our efforts in the conservation and development of new energy sources. Action in these areas, taken collectively, will exert powerful pressures on the inflated price. No cartel is so insulated from economic conditions that its price structure is invulnerable to a transformation of the market. Because of the reduced consumption in the past year, OPEC has already shut down a fourth of its capacity, equaling 9 million barrels a day, in order to keep the price constant. New oil exploration, accelerated by the fivefold-higher price, is constantly discovering vast new reserves outside of OPEC. The $10 billion in new energy research in the United States—on the scale of the Manhattan project and the moon-landing program—is certain to produce new breakthroughs sooner or later.

As the industrialized nations reduce consumption and increase their supply, it will become increasingly difficult for OPEC to allocate the further production cuts that will be required among its members. Even now, some OPEC members are shaving prices to keep up their revenue and their share of the market. Indeed, it is not too soon in this decade of energy shortages to plan for the possibility of energy surpluses in the 1980's.

The strategy we have been pursuing with our partners since the Washington Energy Conference has linked our domestic and international energy policies into a coherent whole. We have made remarkable progress, but much remains to be done. The question now is whether the industrialized countries have the will to sustain and reinforce these promising initiatives. Conservation and the development of new sources of energy are the next priorities on our common agenda.

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Consumer solidarity is not an end in itself. In an interdependent world, our hopes for prosperity and stability rest ultimately on a cooperative long-term relationship between consumers and producers.

This has always been our objective. It is precisely because we wish that dialogue to be substantive and constructive that we have insisted that consumers first put their own house in order. Collective actions to restore balance to the international economic structure, and the development in advance of common consumer views on the agenda, will contribute enormously to the likelihood of the success of the projected consumer-producer dialogue. Without these measures, discussions will only find us restating our divisions and tempt some to seek unilateral advantages at the expense of their partners. The result will be confusion, demoralization, and inequity, rather than a just reconciliation between the two sides.

A conciliatory solution with the producers is imperative, for there is no rational alternative. The destinies of all countries are linked to the health of the world economy. The producers seek a better life for their peoples and a future free from dependence on a single depleting resource; the industrialized nations seek to preserve the hard-earned economic and social progress of centuries; the poorer nations seek desperately to resume their advance toward a more hopeful existence. The legitimate claims of producers and consumers, developed and developing countries, can and must be reconciled in a new equilibrium of interest and mutual benefit.

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Secretary Kissinger's Statement on Domestic and International Energy Policy

Statement by Secretary Kissinger before the Subcommittee on Energy of the Joint Economic Committee of the Congress, September 19, 1975.

The events set in motion by the October 1973 war exposed the dangerous vulnerability we had incurred as a result of our growing dependence on imported oil. The oil embargo and the series of massive oil price increases which followed underscored the degree to which we had lost control over the price of a central element of our economic system. We also found that our own economic well-being and security were threatened by the energy vulnerability of our allies and that the escalating price of energy had wreaked havoc on the programs of developing countries.

Over the past two years our objective has been to develop a comprehensive strategy to end our domestic and international energy vulnerability. Our goal has been to build a series of policies which would:

—Protect us against short-term dangers such as embargoes and the destabilizing movements of assets held by oil countries;

—Provide support for developing countries hard hit by high oil prices;

—Make possible a return to noninflationary growth, and

—Create the political and institutional conditions for a productive dialogue between consumer and producer countries.

We have made substantial progress in meeting the immediate crisis.

We and our partners in the International Energy Agency (IEA) have joined in a plan for mutual assistance in the event of a future embargo. In April we and other industrialized countries agreed on a $25 billion support fund to offset abrupt or predatory shifts of funds by OPEC [Organization of Petroleum Exporting Countries] as well as balance-of-payments problems. Also at our initiative, the International Monetary Fund will create a special Trust Fund for concessional loans to developing countries hit hardest by oil price increases. We have also coordinated closely with Germany, France, Japan, and Britain to restore sustained economic expansion in the industrial world.

Despite this progress much remains to be done if we are to overcome the impact of the energy crisis.

Here at home we must move rapidly in reducing our dependence on imported oil. Our present vulnerability will continue, and indeed increase, unless we intensify our conservation efforts and promptly initiate those programs and policy measures which will insure the availability of major amounts of new energy by the end of this decade and into the 1980's.

For the short term we look to conservation as the primary means of reducing our import dependence. In this regard, the decontrol of domestic oil prices is the single most important conservation measure we can take.

But there should also be other elements in our domestic energy policy, including the deregulation of natural gas, as well as the accelerated exploration of potential resources in Alaska and on the outer continental shelf.

We cannot succeed alone in this effort. We must work closely with other major consuming countries if we expect to end the monopoly power of the producer countries in unilaterally setting oil prices.

We and our IEA partners are now developing a comprehensive program of long-term cooperation. In the conservation area we will set overall targets based on equitable burden sharing among members, and we will verify each other's performance.

To accelerate the development of new energy, IEA members must pool their resources and expand research and development efforts. To cover the massive development costs, IEA countries must work together to insure that the necessary financial resources will be available.

It is also important that we establish a common basis for developing alternative supplies by agreeing that none of the IEA countries will permit imported oil to be sold in our economies below a certain minimum price

level. The object of this element of consumer policy is to assure that our efforts are not disrupted by predatory pricing by OPEC and to protect those countries that invest heavily in higher cost energy from being put at a competitive disadvantage if the oil producers engage in predatory pricing.

These efforts by the United States and its IEA partners are extremely important, for without serious joint effort by the consumer countries our credibility will be questioned and no balanced dialogue with producer countries will be possible. We seek such a dialogue with the producing countries, one that will underscore our mutual interests rather than our differences. If we and our IEA partners seek reliable access to oil supplies at stable prices, the producing countries also seek secure outlets for their growing assets and greater participation in the world financial and economic system.

We have worked hard to launch a productive dialogue on energy, raw materials, development, and finance. We look forward to the meetings on these subjects which will begin next month. They offer an opportunity for consumer and producer countries alike to demonstrate their ability to create new ties and relationships.

A major test of the producer country commitment to a more positive relationship will occur in the next few days when OPEC countries meet to decide whether or not to extend their own moratorium on oil price increases. After the dramatic price increases of the past two years another oil price rise can only endanger the positive dialogue which we all seek. It will affect the expansionary policies of industrialized countries. It will further weaken the economies of the developing countries, so many of which are already in precarious condition. It could also result in the stagnation of OPEC oil exports and lead to demands for yet higher oil prices. Such a series of events is in the interest of no one and can only jeopardize our hopes for a new and constructive relationship.

Regardless of the decisions of the oil producers, the United States must regain control of its own economic future. Our leadership role in the world demands that we demonstrate our national resolve to overcome the problems we face and our determination not to entrust our political and economic destiny to others.

Consumer-Producer Dialogue

Martinique Communique

Excerpt from the Communique issued at the conclusion of meetings between the President of the United States and the President of the French Republic in Martinique, December 16, 1974, in which they called for a conference of oil producers and consumers.

The President of the United States, Gerald R. Ford, and the President of the French Republic, Valéry Giscard d'Estaing, met in Martinique December 14–16, 1974, to discuss current issues of mutual concern. They were joined in their discussions by the Secretary of State and Assistant to the President for National Security Affairs Henry A. Kissinger and Minister of Foreign Affairs Jean Sauvagnargues, and by Secretary of the Treasury William Simon and Minister of Finance Jean-Pierre Fourcade. The Ministers also held complementary side talks.

The meeting took place in an atmosphere of cordiality and mutual confidence. President Ford and President Giscard d'Estaing welcomed the opportunity to conduct detailed substantive discussions on the whole range of subjects of mutual concern. As traditional friends and allies, the two nations share common values and goals and the two Presidents expressed their determination to cooperate on this basis in efforts to solve common problems.

They reviewed the international situation in the economic, financial and monetary fields.

The two Presidents agreed that the Governments of the United States and of the European Community, in the name of which the French President spoke on this subject, must adopt consistent economic policies in order to be effective in avoiding unemployment while fighting inflation. In particular, they agreed on the importance of avoiding measures of a protectionist nature. And they decided to take the initiative in calling additional intergovernmental meetings should they prove necessary for achievement of the desired consistency of basic economic policies among industrial nations.

In the light of the rapid pace of change in international financial positions in the world today, the Presidents were in full agreement on the desirability of maintaining the momentum of consideration of closer financial cooperation both within the International Monetary Fund and through supplementary measures. As one specific measure to strengthen the existing financial framework, the Presidents agreed that it would be appropriate for any Government which wished to do so to adopt current market prices as the basis of valuation for its gold holdings.

The two Presidents considered in depth the energy problem and its serious and disturbing effects on the world economy. They recognized the importance for the USA, the EEC and other industrialized nations of implementing policies for the conservation of energy, the development of existing and alternative sources of energy, and the setting up of new mechanisms of financial solidarity. They stressed the importance of solidarity among oil importing nations on these issues.

The two Presidents also exchanged views on the desirability of a dialogue between consumers and producers and in that connection discussed the proposal of the President of the French Republic of October 24 for a conference of oil exporting and importing countries. They agreed that it would be desirable to convene such a meeting at the earliest possible date. They regard it as important that all parties concerned should be better informed of their respective interests and concerns and that harmonious relations should be established among them in order to promote a healthy development of the world economy.

The two Presidents noted that their views on

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these matters are complementary and, in this context, they agreed that the following interrelated steps should be taken in sequence:

—They agreed that additional steps should be taken, within the framework of existing institutions and agreements to which they are a party, and in consultation with other interested consumers, to strengthen their cooperation. In particular, such cooperation should include programs of energy conservation, for the development of existing and alternative sources of energy and for financial solidarity.

—Based on substantial progress in the foregoing areas, the two Presidents agreed that it will be desirable to propose holding a preparatory meeting between consumers and producers to develop an agenda and procedures for a consumer/producer conference. The target date for such a preparatory meeting should be March 1975.

—The preparatory discussions will be followed by intensive consultations among consumer countries in order to prepare positions for the conference.

The two Presidents agreed that the actions enumerated above will be carried out in the most expeditious manner possible and in full awareness of the common interest in meeting this critical situation shared by the United States and France and all other countries involved.

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U.S. Opening Statement at Preparatory Meeting

Statement by Charles W. Robinson, Under Secretary for Economic Affairs, head of the U.S. delegation to the Preparatory Meeting for the proposed conference of oil producers and consumers in Paris, April 7–15, 1975.

The United States is pleased to participate in this preparatory meeting for the international conference on energy and related economic problems, which initiates an important—in fact an essential—dialogue between oil producer and consumer countries. We congratulate the Government of France for its initiative and express our appreciation for its efforts in convening this meeting today. We also extend thanks for the generous hospitality which is being extended to those of us fortunate enough to be invited to Paris in April.

There have been various analyses and interpretations of the oil crisis that began in the autumn of 1973. There are clearly differences of view among us, which will be discussed in the conference that we will be organizing at this preparatory meeting, but there are also many areas of common interest to which we will need to devote our primary efforts.

I believe that we can agree on at least two things.

First, the quintupling of oil prices over the past two years, although posing problems for the world economy, has heightened awareness of the interdependence of nations.

Second, the problems emanating from the current oil situation cannot be resolved through confrontation or by unilateral action, but only through cooperative efforts among all major parties.

We all share a common concern that the social and economic well-being of our peoples be enhanced rather than retarded, that developing nations be able to look forward to their rapid development rather than have their prospects undermined, and that the international financial and trading system be responsible enough and strong enough to cope with new stresses and meet our common needs.

In calling the Washington Energy Conference a little more than a year ago, we made clear from the outset that the initial discussion among the major industrialized importers of oil was only a first step toward the necessary dialogue between both consumers and producers of oil.

At the conclusion of the Washington Conference, ministers of the major industrialized countries stated their recognition of the "need to develop a cooperative multilateral relationship with producing countries, and other consuming countries that takes into account the long-term interests of all."

Returning to this theme in February, one year later, Secretary Kissinger stated that:

> In an interdependent world, our hopes for prosperity and stability rest ultimately on a cooperative long-term relationship between consumers and producers.
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> The producers seek a better life for their peoples and a future free from dependence on a single depleting resource; the industrialized nations seek to preserve the hard-earned economic and social progress of centuries; the poorer nations seek desperately to resume their advance toward a more hopeful existence.

A year has passed since the Washington Conference. In that time, energy problems and the inflation and recession to which they have contributed have adversely affected large numbers of people throughout the world. We and other like-minded consumer nations have agreed on a series of collective measures to enable our economies and the world economy to meet the problems associated with the increased price of oil. We sought the consumer cooperation that we considered necessary to insure a substantive and constructive dialogue. The International Energy Agency, present today as an observer, was established last November in recognition that a degree of consumer solidarity had been achieved and to serve as the institutional vehicle for the further elaboration of necessary cooperative measures.

Our purpose at this preparatory meeting is to organize the procedures for the conference that will build on the dialogue initiated at this meeting. Toward this end, we need to strike a balance between the immense scale and complexity of the world energy problem on the one hand and the constraint of realistic expectations for concrete results on the other. It is certainly true that today we are living in a highly interdependent world economy. The countries of the world have an interest in many economic issues in addition to the international oil situation. But if we are to have a conference with a reasonable expectation of tangible results, we must set bounds as to what such a meeting is designed to achieve. We must therefore consider carefully the scope of both the agenda and participation of the conference.

With regard to the agenda, we are here, in the words of the invitation received from the President of the French Republic, to organize a conference "to examine the energy problems to which many aspects of international economic relations are linked." The social, economic, and political dimensions of this problem are enormous, and the characteristics of the relations between producers and consumers of oil are in many respects unique. Our discussions are bound to overlap at times with other aspects of the world economy, and due account must be taken of such linkages. But I feel strongly that the work program to be developed here should be concentrated on the specifics of energy and related matters and not become diluted with parallel discussions of other issues, however important they may be.

I say this recognizing that oil is only one of the major commodities traded on world markets and that, indeed, all commodities are interrelated within the world trade and financial system. We recognize the need for imaginative new initiatives in this area and are indeed prepared to discuss these other issues elsewhere in appropriate fora, and I take particular note of the upcoming special session of the U.N. General Assembly in September. The point I wish to make here is simply that we have more than enough to handle with the energy-related problems in the effort we are initiating today. To broaden the scope of our discussions would substantially decrease the likelihood of a productive outcome.

As for the number of participants in the main conference, we would foresee a reasonable limitation in participation, but with

balanced representation of industrialized consumer countries, developing consumer countries, and the oil-exporting countries. The total number should be sufficiently restricted to permit constructive discussions but large enough that all interests are adequately represented.

It will obviously be impossible for us in this preparatory meeting to designate in a specific manner the participants in the eventual main conference. However, we can concentrate on developing procedures under which participants can be designated in the period between the end of this meeting and the convening of the full conference.

In conclusion, we are initiating a process of vital and far-reaching concern to the international economy. The people of our nations and of other nations expect and deserve constructive results from this process. We must respond with determination and imagination and take the initial steps at this meeting toward more harmonious relationships in energy and related economic fields.

I pledge the best efforts of the U.S. Government to that end.

U.S. Closing Statement at Preparatory Meeting

Statement by Thomas O. Enders, Assistant Secretary for Economic and Business Affairs, at the conclusion of the Preparatory Meeting of the proposed conference of oil producers and consumers in Paris, April 15, 1975.

I wish to express appreciation to the Government of France for acting as host at this preparatory meeting, on behalf of Under Secretary Robinson, the U.S. delegation, and myself. It has provided a useful opportunity for an exchange of views among industrialized countries, oil-exporting nations, and developing countries on a range of subjects of mutual interest. The meetings have proceeded constructively, and there has been a genuine desire to understand and appreciate respective points of view.

We are disappointed that we have not been able to complete the arrangements necessary for the convening of a formal conference. We have agreed to return to our capitals to consider various points of view which have been discussed in considerable detail over the past nine days. We will remain in contact through appropriate channels to resume together preparations for a conference as quickly as possible.

As you are aware, the major subject of discussion during the last several days has been the proposed draft agenda for a full conference. I do not believe it useful to comment in detail on the various issues involved in these discussions. There has been a basic difference of view with regard to the scope and objectives of the proposed conference.

We were, of course, invited here by the President of the French Republic to prepare for a conference on energy and energy-related issues. We came here ready to discuss these issues, which are of central concern to all countries. Others have insisted on a much broader conference, extending to all aspects of the relationship between the industrialized countries and the developing world.

We have been and will continue to be willing to discuss seriously raw materials and other development issues in forums more directly concerned with them and to attempt therein to seek mutually beneficial solutions. However, we believe that the proposed conference could achieve constructive results only if it were focused on a relatively limited number of points related to the central subject of energy.

I would like to stress that the discussions of the past nine days have taken place in an atmosphere of cordiality, and genuine attempts have been made to understand respective points of view. In this sense we must all consider this meeting has not been a failed

effort. The United States attaches great importance to its exchanges with each of the countries represented at this meeting. Our intention is to continue our efforts to promote cooperation with them through all channels.

Results of Preparatory Meeting

Statement by Charles W. Robinson, Under Secretary for Economic Affairs, before the Subcommittee on International Resources, Food, and Energy of the House International Relations Committee, May 1, 1975, in which he discusses the breakdown of the Preparatory Meeting in Paris.

I am pleased to have this opportunity to appear before your subcommittee to provide testimony on the recently concluded preparatory meeting between oil producing and consuming nations and to discuss in broad terms the relationship of this meeting with our overall energy policy.

At the Washington Energy Conference in February 1974, the United States and 12 other industrialized nations agreed that, at the appropriate time, they should meet with developing consumer states and producing countries to explore possibilities for mutually acceptable solutions to the energy problem. The International Energy Agency (IEA), created nine months later, has as one of its goals the institution of contacts and dialogue with the producing nations.

We realized, however, that meaningful discussions could take place only after consuming nations had proved that they would not remain helpless over time to the arbitrary manipulation of the world oil market by the OPEC [Organization of Petroleum Exporting Countries] states. Before we could negotiate effectively, or even gain the necessary respect for serious discussions, we had to undertake unified actions in the energy field that would demonstrate strength and consistency of purpose.

Consequently, our international energy efforts since the Washington Energy Conference have concentrated on the creation of a framework of close consumer-country cooperation. Through this effort, we seek to reduce, and eventually eliminate, our vulnerability to manipulation of our oil supply and oil prices.

Substantial progress has been made in building consumer solidarity over the past 14 months. In the IEA, we have agreed on emergency provisions that will enable a unified and coordinated response to any future embargo. Along with other OECD [Organization for Economic Cooperation and Development] countries, we have agreed to create within the OECD a $25 billion support fund to act as a lender of last resort to industrialized countries suffering severe balance-of-payments costs because of high oil prices.

These efforts, basically short-term insurance policies, are complemented by essential longer term programs to reduce IEA members' collective dependence on imported oil. We have established as a conservation target the reduction of IEA oil imports by 2 million barrels a day by the end of 1975, and similar objectives will be established for later years. We have agreement in principle on a series of interrelated measures to accelerate the development of indigenous energy supplies; it is anticipated that implementation programs will be developed and approved by July 1.

The Paris preparatory meeting of April 7–15, or "Prepcon," took place as a result of a French initiative. Last fall the French President proposed a meeting of a small number of industrialized, developing, and producing countries in Paris to plan a multilateral conference on energy; invitations to such a meeting were issued in March. The French proposal was similar to one made earlier by Saudi Arabian Petroleum Minister [Ahmad Zaki] Yamani, and the French in-

vited the same countries to the Prepcon that Minister Yamani had originally proposed. The Shah of Iran had also shown interest in a producer-consumer conference.

In December at Martinique, President Ford conditioned the participation of the United States in a producer-consumer conference on a sequential four-stage approach, which the IEA subsequently endorsed. In the first stage, consumer cooperation would be strengthened in the areas of finance, conservation, and accelerated development of energy; as I mentioned earlier, concrete programs in these areas have been agreed to. The second stage was to be the Prepcon. Stage 3 would involve intensified consumer cooperation and the development of common consumer positions. Stage 4 would be the holding of the conference. In the light of progress made toward consumer solidarity, we agreed in late March to proceed with the preparatory meeting.

Issues Discussed at Preparatory Meeting

The task of the Prepcon was to agree on the procedures and participants for the energy conference to be held later this year. The 10 participants included representatives from the industrialized countries (the United States, Japan, and the nine members of the European Community represented through a single spokesman), the developing consumer countries (Brazil, India, and Zaïre), and the OPEC nations (Saudi Arabia, Iran, Venezuela, and Algeria). As host, France, which has declined to join the IEA, provided the "technical chairman"; the French were also represented in the European Community delegation.

We went to Paris determined to be cooperative and constructive. We believed that the conference should be one in which rhetoric was minimized and real work toward concrete solutions was maximized. Therefore it was essential, in our view, to have an agenda for the conference that was manageable in size and which offered the promise of real progress.

Despite nine days of intense and grueling negotiations, the 10 delegations at the Prepcon could not reach agreement on the procedural issues for the conference. The talks failed to resolve the fundamental question of what type of conference it would be. The United States, the European Community, and Japan, unanimously supported by other members of the IEA, maintained that the conference should focus on energy and energy-related matters as proposed in the French invitation. The OPEC and LDC [less developed countries] representatives were willing for the conference to discuss energy but only if equal status were given to a wide range of problems relating to the economic relations between developing countries and the rest of the world. Specifically, they insisted that the conference treat raw materials, monetary reform, and assistance to most seriously affected countries on the same basis as energy.

The industrialized countries demonstrated considerable flexibility in the negotiations, offering to interpret quite broadly the topics that could be considered under the general energy rubric. We offered in addition to treat all non-energy-related subjects in other appropriate fora where work on them was already underway. We were not willing, however, to agree, as the OPEC and LDC representatives seemed to want, to create another unproductive forum to discuss the "new international economic order."

Even though the talks adjourned because of disagreement over this basic issue, several other issues were left undecided. The OPEC and LDC representatives sought specific agenda references to maintaining the purchasing power of export earnings and the real value of investments; i.e., indexation of prices and investments. We argued that we could not accept such references since they prejudged the outcome of the conference. We said, however, that we were prepared for them to raise these subjects for discussion at the conference under an agenda formulation that was neutrally cast. Since the Prepcon's mandate was only procedural, we did not attempt to engage in substantive debate over indexation.

Spearheaded by Algeria, the OPEC and LDC states also opposed IEA attendance as an observer at the full conference. They maintained that IEA is a confrontational

organization whose existence is not recognized by the OPEC nations. They argued that the presence of the IEA would give the conference too much of an energy orientation and that OECD presence at the conference should suffice for IEA representation. With unanimous support from other IEA members, the United States, the European Community, and Japan were prepared to condition their attendance at the conference, and acceptance of any agreed agenda, on IEA presence as an observer with the right to speak. We believed that to agree on IEA exclusion would be to accept implicitly the confrontational charge. Furthermore, IEA exclusion would prevent representation at the conference (via IEA) of many important consuming countries. This issue was not settled before the conference adjourned.

Let me note parenthetically that it was clear early in the first week that compromise on these fundamental differences was unlikely. Nevertheless the participants continued their negotiations for several extra days and nights in order to explore all possibilities for accommodation. The adjournment of the Prepcon was not accompanied by recrimination among the participants.

Major Conclusions Drawn From Meeting

Mr. Chairman, it is not correct, I think, simply to characterize the Prepcon as a failure. It is true that the main purpose of the meeting was not achieved. On the other hand, all participants gained a much greater appreciation of the others' views which may have a salutary effect on future bilateral and multilateral relations.

What are the major conclusions we have drawn from the Prepcon?

First, the OPEC states have succeeded in linking their interests with those of the LDC's even though high oil prices are seriously damaging the economies of many developing nations. Some LDC nations unfortunately find attractive the idea that they can help solve their economic problems by following the OPEC example; i.e., cartelizing and demanding higher prices for all raw materials. We expect the OPEC–LDC bloc under OPEC leadership to be a strong and vocal force in future international fora, at least until developing countries come to recognize that widespread cartelization will be neither practical nor productive.

Second, the industrialized nations demonstrated strong consumer solidarity, proving the tremendous progress that has been made in the IEA over the past 14 months. During the Prepcon, we coordinated our positions closely with other IEA members. The decision to hold firm in insisting on an energy conference and on IEA participation received unanimous endorsement from the IEA Governing Board, which is composed of representatives from the 18 member countries.

Finally, it appears that the timing is not yet right for a multilateral dialogue on key energy issues. The producers at the Prepcon showed little willingness to engage in serious discussion on energy unless the industrialized nations would consider at the same time the broader issues of LDC relations.

Effect of Meeting on U.S. Energy Policy

We regret that the Prepcon did not succeed. We remain willing to participate in a multilateral conference if one can be arranged that concentrates on energy. But we do not expect our own energy policies to be affected in a major way by the suspension of the Prepcon talks.

Our overall energy policy, pursued both in the United States and in coordination with other IEA countries, will continue to be to bring about a basic shift in the supply-demand balance in the world oil market. This will reduce our vulnerability to foreign supply disruptions, reduce the ability of a small group of countries to manipulate world oil prices arbitrarily, and enable prices to approach their long-term equilibrium level.

The focus of our international efforts will remain in the IEA. We intend to insure that momentum is maintained as we press ahead to implement the conservation and accelerated-development programs.

The Prepcon proved that other IEA members share our belief in the necessity of consumer solidarity. They, too, believe the IEA has a key role to play in dealing with the energy problem. They will, we think,

work with us to insure that the IEA's importance and influence will increase in the future.

Given the leading role which the United States has played in the development of the International Energy Agency, it is most important that the United States accede to the Agreement on the International Energy Program without reservation. The United States is now applying the agreement provisionally pending adoption of the requisite implementing legislation by Congress. Unfortunately, the legislation currently under consideration in the House of Representatives would not permit us to adhere to the International Energy Program without reservation. Specifically, this legislation does not fully meet vital IEA requirements relating to demand restraint; that is, conservation, the allocation of petroleum in case of another embargo, and the establishment of a petroleum reserve. The antitrust provisions of the legislation under consideration are also deficient. While this subcommittee is not immediately concerned with this legislation, may I take this opportunity to urge you and your colleagues in the House to make every effort to promptly approve legislation which will permit the United States to accede to the Agreement on the International Energy Program.

In the months ahead, we will also seek to intensify our cooperative bilateral relations with producing governments. We have many common interests which provide important opportunities to work together. For instance, our joint commissions with Saudi Arabia and Iran are making significant progress in identifying key areas for cooperation. As we build on and broaden the scope of our activities with these two producers and with other OPEC states, we will create in time a set of economic and political relationships that should enable us to help them achieve important national goals and to appreciate more fully their responsibility for pursuing oil policies that lend stability to the international economy.

We are convinced, Mr. Chairman, that the oil crisis will not simply go away. Our policies are designed to meet the challenge of that crisis. They will, if properly and vigorously pursued, permit us to achieve our two fundamental objectives: an international price of oil set by free market forces and substantial U.S. self-sufficiency in energy.

U.S. Calls for Resumption of Consumer-Producer Dialogue

Excerpts from Secretary Kissinger's address, "Strengthening the World Economic Structure," delivered in Kansas City, May 13, 1975.

. . . . .

It is in energy that the challenge to the economic system has been the most effective and has had the most severe impact.

For years the United States and other industrial countries built their prosperity on ever-increasing imports of inexpensive foreign oil. Now we see that both the price and availability of those supplies can be determined by decisions over which we have no influence. Our jobs, our output, our future prosperity, are at risk.

In response, at U.S. initiative, 18 major industrial countries created the International Energy Agency (IEA) to coordinate our efforts in a common strategy.

Our first responsibility was to protect ourselves against emergencies. We have to be prepared to deter the use of oil or petrodollars as political weapons or to defend ourselves if we are given no choice. To this end, we and our partners have developed a comprehensive plan to build up oil stocks, coordinate conservation measures, and share available supplies in the event of a new embargo. We have also agreed on a $25 billion "financial safety net" to protect against the stresses of large oil deficits and possible financial manipulation.

The second objective of the strategy is to bring pressure on the oil price through the market. If we act decisively to reduce the consumption of imported oil and develop alternative sources, we will sharply reduce demand. The producers can restrict production to maintain high prices and allocate the cuts among them, but at some point the severe decrease in demand will become a burden on those countries who seek maximum revenue for development.

Accordingly, we and our partners first set joint conservation goals. We then reached preliminary agreement on a plan to stimulate alternative sources. The plan calls for cooperation in research and development and a common minimum price mechanism to protect domestic alternative energy sources from competition from imported oil. The ministers of the International Energy Agency meet later this month to accelerate the common effort. We shall propose ways to exploit our greatest asset—our technological capability and skill, particularly in the development of alternative energy sources.

In the end the key to the international effort will be what America does. We use fully half of the industrial world's energy. If we bring our consumption under control, so will other industrial countries. Indeed, other countries are already ahead of us in adopting new taxes and other programs to curb energy use. But if we do not act now, while recession is holding down demand for oil, our vulnerability will grow again when our recovery gains momentum.

The choice is clear: either we pass now an effective program of energy conservation and energy development or we become dependent on foreign sources for half our oil within a few years and correspondingly vulnerable to political pressures or manipulation.

The Congress has before it President Ford's energy program. Its decision is therefore critical to our future well-being and that of the international community.

Ultimately, producers and consumers of energy must develop a new and balanced relationship. A first attempt at dialogue at the preparatory meeting called by President Giscard d'Estaing [of France] in April did not succeed.

The United States wants to say now that it is prepared to attend a new preparatory meeting. We believe that the meeting should be prepared through bilateral contacts between the consumers and producers. The United States will initiate such contacts with its partners in the IEA, with the Government of France, and with the producers. Our own thinking on the issue of raw materials, and the manner in which it can be addressed internationally, has moved forward. We can thus resume the dialogue in a new atmosphere.

. . . . .

French Aide Memoire for Second Preparatory Meeting

Aide Memoire attached to the letter of invitation to the Second Preparatory Meeting to be held in Paris, October 13–16, 1975, outlining the consensus which had been reached among the 10 participants on the purpose of the meeting.

1.1. It has been agreed that the questions to be discussed during the dialogue between industrialized countries and developing countries are energy, raw materials and the problems of development, including all related financial questions.

1.2. These questions will be dealt with on equal footing. The participants in the dialogue will in particular spare no effort to advance toward constructive solutions on each of these subjects.

2.1. A new preparatory meeting will be held in Paris at as early a date as possible, and no later than October 15, comprising the same members, at the same level and in accordance with the same rules of procedure (particularly as regards observers) as the preparatory meeting last April.

2.2. The name of this meeting will be: "Preparatory meeting for the conference between industrialized countries and developing countries" or "Prepar-

atory meeting for the conference on international economic cooperation".

2.3. The task of the preparatory meeting will be:

—To confirm the consensus reached at the April preparatory meeting on the convening of a limited but representative conference, on the number of its participants and on the procedure for their selection.

—To submit to the conference proposals on the setting up of commissions and their composition (members and observers).

2.4. The preliminary meeting should be prepared in such a way that it reaches a consensus within no more than two to three days.

3.1. The preparatory meeting will be followed up, within a maximum of two months, by the conference itself. The conference will comprise 27 members, eight from the industrialized countries and 19 from the developing countries. Each of these two groups will select its representatives to the conference within one month after the preparatory meeting.

3.2. The conference will open at the ministerial level. In order to ensure the actual participation of all the ministers, it would be preferable that its duration does not exceed three days.

3.3. The essential task of the conference will be to decide on the proposals to be submitted for its approval by the preparatory meeting.

3.4. This should induce it to set up four commissions, corresponding to the themes of the dialogue, to determine their composition, to set general guidelines for them within the framework of paragraphs 4.3. to 4.6. inclusive and to agree on what follow-up their work should have.

4.1. These commissions will not have more than 15 members. In determining its representation in each commission, each of the two groups at the conference will choose from among its members, those who, because of their special interest and the overall significance of their participation seem best suited to take part in order that the work may be carried out in an effective and responsible manner. The chairmanship of each of the commissions will be assumed by two co-chairmen designated by each of the two groups respectively.

4.2. The commissions will be composed of high-level experts representing their government.

4.3. The commission on energy, within the framework of an overall study of prospects for energy production and consumption in the world, including hydrocarbons, will be entrusted with facilitating through suitable ways and means the arrangements between oil producers and consumers which may seem advisable.

4.4. The commission on raw materials, through suitable ways and means and taking the existing situation into account, will be entrusted with facilitating the arrangements which may seem advisable in the area of raw materials—including food products—which are of particular interest to the developing countries.

4.5. The commission on development, through suitable ways and means and taking the existing situation into account, will be entrusted with facilitating the arrangements which may seem advisable in the area of cooperation for development.

4.6. The commission on financial affairs, while respecting the jurisdiction of international institutions (IMF, World Bank) will study all financial problems, including their monetary aspects, related to the work of the three preceding commissions. It will be composed of an appropriate number of members from each of these three commissions.

4.7. The commissions on raw materials and development will, in particular, take into consideration the work carried out by other appropriate international bodies and will establish the necessary contacts with these groups.

4.8. Joint meetings of the co-chairmen of these commissions may be planned if the need arises.

4.9. Observers from organizations which are directly concerned with the problems being discussed will be able to attend the commissions and will have the right to speak.

5.1. The conference will meet again at the ministerial level in about 12 months.

5.2. One or several meetings of the conference at the level of government officials may possibly be held at least six months after the first meeting of the conference at the ministerial level.

Second Preparatory Meeting Declaration

Final Declaration adopted by the Second Preparatory Meeting, October 16, 1975.

PARIS, *16 October 1975.*

1. The participants in the Preparatory Meeting for the international Conference proposed by the President of the French Republic, which was held in Paris from 7 to 15 April 1975, met again at the International Conference Centre from 13 to 16 October 1975 under the technical chairmanship of Mr. de Guiringaud, Ambassador of France, with a view to pursuing preparation for the dialogue on energy, raw materials, problems of development, including all related financial questions.

2. The ten delegations confirmed the agreement of their authorities on the convening of an international conference on these questions. They decided that the Conference will be called the "Conference on International Economic Co-operation", that it will be held in Paris, that it will be composed of 27 members designated as indicated below, and that it will be convened at ministerial level on 16 December 1975 for a session of two or possibly three days. The Secretary-General of the United Nations will be invited to the Ministerial Conference.

3. The European Economic Community, the United States and Japan, on the one hand, and the seven developing countries participating in the Preparatory Meeting (Algeria, Brazil, India, Iran, Saudi Arabia, Venezuela, Zaïre), on the other hand, will assume responsibility for the designation, from among their respective groups and according to the procedures which the industrialized countries and the developing countries, respectively, deem appropriate, of five industrialized countries and twelve developing countries, to be added to the present participants so as to bring to twenty-seven the number of participants in the Conference. The French Government will be notified, within a period which should not exceed one month, of the list thus established of the delegations to be invited to the Ministerial Conference.

4. The ten delegations also decided that the Conference should have two co-chairmen chosen respectively by each of the two participating groups from among its members, and that they should preside alternately over the meetings in a manner to be agreed between them. The participants in the Preparatory Meeting recommend that the two co-chairmen should be designated as soon as possible after the lists of participants in the Conference have been completed, and they suggest that the two co-chairmen should begin, immediately after being designated, to take together all necessary steps, in liaison with the host country, to ensure that the Ministerial Conference proceeds satisfactorily.

5. The Preparatory Meeting proposes to the Ministerial Conference that it set up a commission for energy, a commission for raw materials, a commission for development and a commission for financial affairs. Each of these commissions should consist of fifteen members, ten of them representing developing countries and five representing industrialized countries, chosen by each of the two groups of participants in the Conference from among its members.

6. In determining the composition of its representation in each commission, each of the two groups at the Conference should choose from among its members those who, because of their special interest and the overall significance of their participation, seem best suited to take part in order that the work may be carried out in an effective and responsible manner.

7. The chairmanship of each of the commissions should be assumed by two co-chairmen designated by each of the two groups respectively. Joint meetings of the co-chairmen of the commissions may be planned if the need arises.

8. The Preparatory Meeting recommends that the intergovernmental functional organizations which are directly concerned with the problems considered, and which the Ministerial Conference deems to be able to make a useful contribution to their discussion, be represented on a permanent basis in the corresponding commissions by observers with the right to speak but without the right to vote, and hence not participating in the formation of a consensus. In addition to the United Nations Secretariat, the list of these organizations should include, in particular, OPEC, IEA, UNCTAD, OECD, FAO, GATT, UNIDO, UNDP, IMF and IBRD.[1] Furthermore, each commission may invite appropriate intergovernmental functional organizations to participate as observers *ad hoc* in the examination of specific questions.

9. Members of the Conference wishing to follow the work of a commission to which they do not belong should be entitled to appoint a representative in the capacity of auditor without the right to speak.

10. The activities of the four commissions whose establishment is recommended by the Preparatory Meeting will proceed on the basis of the relevant paragraphs of the Aide-Memoire annexed to the

[1] Organization of Petroleum Exporting Countries; International Energy Agency; United Nations Conference on Trade and Development; Organization for Economic Cooperation and Development; Food and Agriculture Organization; General Agreement on Tariffs and Trade; United Nations Industrial Development Organization; United Nations Development Program; International Monetary Fund; International Bank for Reconstruction and Development.

French Government's invitation to this Meeting, in the light of the following clarifications and interpretations:

(a) It is understood that the Commission on Energy will facilitate all arrangements which may seem advisable in the field of energy.

(b) It is understood that the Commission on Raw Materials will take into account the progress made in other international forums and will be entrusted with facilitating the establishment or reinforcement, as the case may be, of arrangements which may seem advisable in the field of raw materials—including foodstuffs—which are of particular interest to developing countries.

(c) It is understood that the Commission on Development will take into account the progress in other international forums and the results achieved, and will be entrusted with facilitating the establishment or reinforcement, as the case may be, of arrangements for accelerating the development of developing countries, on the basis of close co-operation.

(d) It is understood that the Commission on Financial Affairs may discuss financial issues, including their monetary aspects, of importance to member countries, while respecting the jurisdiction of international institutions (IMF, IBRD).

(e) It is understood that the four Commissions should function in parallel and that the results of their work are linked and should be submitted to the Ministerial Conference.

11. It is agreed that any delegation may raise any subject relevant to the themes of the dialogue for discussion in the Commissions.

12. It has been agreed in accordance with the relevant paragraphs of the above-mentioned Aide-Memoire that the Ministerial Conference will be called upon to set the general guidelines for the work of the Commissions.

13. The Preparatory Meeting recommends to the Ministerial Conference that the relevant paragraphs of the above-mentioned Aide-Memoire, as interpreted and clarified above, as well as the above-mentioned principle that any relevant subject may be raised for discussion in the Commissions, serve as the general guidelines for the Commissions.

14. Some delegations have already tabled with this Preparatory Meeting documents proposing subjects to be discussed in the Commissions. The Preparatory Meeting recommends that the Ministerial Conference agree that these and any other proposals which may be tabled subsequently in accordance with the general guidelines be discussed in the Commissions.

15. As regards the practical measures, the Preparatory Meeting recommends that the Conference adopt English, Arabic, Spanish and French as official languages and working languages.

16. The Preparatory Meeting recommends that the Conference adopt the Rules of Procedure which it itself had adopted, and which are based, in particular, on the principle of "consensus", according to which decisions and recommendations are adopted when the Chair has established that no member delegation has made any objection.

17. The Preparatory Meeting considers that the Conference should have an international secretariat with an exclusively administrative and technical function, the Ministerial meeting being responsible, on the basis of proposals by the two co-chairmen, for determining its organization, establishing its operational procedure and allocating the financial costs in respect of it. It is understood, however, that pending a decision on the provisions to be adopted for the continuation of the work, the French Government will assume responsibility and provide the secretariat for the Ministerial meeting scheduled for December 1975, under the conditions in which these services were provided for the Preparatory Meeting.

18. The Preparatory Meeting finally recommends that the Ministerial Conference decide to meet again at ministerial level in about twelve months' time. One or several meetings of the Conference at the level of government officials could possibly be held at least six months after the first meeting of the Conference at ministerial level.

19. In conclusion, the participants paid tribute to President Giscard d'Estaing for the initiative taken by him, thanks to which a dialogue was successfully initiated, and to the French Government for all the efforts it has made towards that end.

Topics To Be Discussed in the Dialogue

U.S. and Developing Countries' lists of proposed subjects for discussion in the four Commissions that will be created by the Conference on International Economic Cooperation when it meets December 16, 1975, in Paris.

LISTS OF SUBJECTS TO BE DISCUSSED BY THE COMMISSIONS, AS PROPOSED BY THE UNITED STATES OF AMERICA

Commission on Energy:

(1) Oil prices, their relationship to long term demand and supply for energy and to world economic progress;
(2) Security of supply and markets for oil and oil products;
(3) Cooperation among developed and developing countries to promote increased energy supplies.

Commission on Raw Materials:

(1) Access to supply and markets for raw materials;
(2) Problems of stability of export earnings;
(3) Growth and diversification of export trade;
(4) Enhancement of long run supply of raw materials through application of capital, management, and technology with mutual respect for contractual obligations;
(5) Enhancement of functioning and stability of markets for commodities, including food, on a case-by-case basis.

Commission on Development:

(1) Problems caused by payments deficits of developing countries particularly the most seriously affected;
(2) Financial assistance, arrangements conducive to the transfer of technology, international investment and capital market access to accelerate growth in developing countries;
(3) Promotion of agricultural and food production through, inter alia, enlargement of world food production capacity, particularly in developing countries, and food aid;
(4) Promotion of development through enhanced trade opportunities among developed and developing countries;
(5) Policies for promoting rapid industrial growth.

Commission on Financial Affairs:

Financial issues related to work of other commissions, for example:

On Energy

—Financial consequences of energy prices;
—Conditions for international investment; including placement of surplus oil funds.

On Raw Materials

—Financial implications of commodity arrangements;
—Export earnings stabilization.

On Development

—Financing of investment projects in the developing countries;
—Financing of food imports of developing countries and increased agricultural production;
—Approaches to payments deficits of developing countries.

DOCUMENT SUBMITTED BY ALGERIA, SAUDI ARABIA, BRASIL, INDIA, IRAN, VENEZUELA AND ZAIRE, IN CONNECTION WITH THE SUBJECTS TO BE DISCUSSED BY THE COMMISSIONS

The delegations of the countries mentioned above recommend that the general guidelines be inspired by the provisions of the Resolution 3362 of the Seventh Special Session of the United Nations General Assembly on "Development and International Economic Cooperation", and also take into account, inter alia, the following:

1.— The Commission on Energy should consider: development and conditions of supply and demand of energy, hydro-carbons and other resources, including the protection of the purchasing power of energy export earnings.

2.— The Commission on Raw Materials should consider: development and supply conditions of raw materials in respect of development needs of developing countries, including the revalorization and protection of the purchasing power of developing countries export earnings.

3.— The Commission on Development should consider: trade (access to markets for products of developing countries, etc.); accelerated industrialization; transfer of technology; development of agriculture; development of infrastructure; problems of supply of food and fertilizers (special attention to devising measures for ensuring adequate supplies of food and fertilizers at reasonable prices to developing countries); special and urgent attention to the question of the grave difficulties of MSAC's [most seriously affected countries] created by the current economic situation; and the need to increase present assistance to meet their pressing requirements.

4.— The Commission on Financial Affairs should consider: relevant aspects of international monetary problems; financial co-operation and investment; and financial flows and investments in industrialized countries, including the problems of long-term investments, the protection of the real value of financial assets, and problems of the international financial markets.

U.S. Closing Statement at Second Preparatory Meeting

Statement by Charles W. Robinson, Under Secretary for Economic Affairs, made at the close of the Second Preparatory Meeting in Paris, October 16, 1975.

We returned to Paris this week to resume the dialogue with solid hopes founded in the consensus proposal circulated by the Government of France. I am very pleased to say that our hopes were fulfilled.

The consensus which brought us back to Paris was the work of six months of intensive contacts and frank exchanges among our governments following our April meeting. These six months brought major changes —in the world itself, in our perceptions, and in our official views. My government, for example, further developed its policies in this area, with the resulting initiatives that were elaborated in Secretary Kissinger's speech to the U.N. seventh special session.

There is now throughout the world a heightened sensitivity to the problems of the poorest countries. We also see a deeper recognition of the interdependence of all the nations of the world. As Secretary Kissinger said at the U.N. special session: ". . . neither the poor nor the rich nations can achieve their purposes in isolation." The improvement of life in each of our countries is linked to progress in all of our countries and in the world economy. In a world where so many more interests join than divide us, we have also come to realize that shared responsibilities underlie international relations.

At no time during this conference have I doubted that we would succeed. Given the needs and problems that brought us here, we had an obligation to succeed—to persevere and confirm the understandings that will carry us into the next stage of this dialogue.

With hard bargaining, but in an atmosphere of good will, compromise, and mutual understanding, we now have taken the step which enables us to launch the dialogue between our countries. Our purpose is to strengthen international economic cooperation in the critical areas of energy, development, raw materials—including foodstuffs —and related financial matters.

I wish to congratulate and thank all my colleagues from the various delegations for their constructive contributions both during and prior to this meeting. I would also like to join with my colleagues in acknowledging the special credit due the Government of France. It was instrumental in achieving the consensus upon which this dialogue was based. As our gracious hosts last April and this week—and as our hosts-to-be in December—our French friends have helped greatly to bring us together as human beings as well as official representatives of our countries. I would like particularly to thank the chairman of the conference, M. de Guiringaud [Louis de Guiringaud, Permanent Representative of France to the United Nations], for his tireless efforts in making this meeting a success.

Particularly difficult and challenging international economic problems have emerged in the last two years. Our aim is to meet these problems and to convert them—as much as we can—into opportunities, seeking practical results through cooperative action. We see this as a joint venture among developed and developing countries.

We have no illusions about the difficulties ahead in building a new global consensus. However, one thing is clear: through the efforts and good will of all participants, we can look forward to a true dialogue, in which the participants—with increasing convergence in their perceptions of the problems—will hear each other out on all subjects of interest which fit within the agreed framework.

The preparatory meeting this week has achieved its purpose by clarifying and reconfirming the consensus. My government is determined now to move ahead. We look for-

ward to the December Conference of Ministers to launch the dialogue on which our hopes are based. Beyond the conference, we look to the prompt engagement of the four commissions in the substantive issues of the dialogue. We have taken an important step at this meeting in establishing the dialogue which can and must contribute significantly to human progress and to the well-being of all of our peoples.

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Energy, Raw Materials, and Development: The Search for Common Ground

The Conference on International Economic Cooperation met at Paris December 16–19. Secretary Kissinger headed the U.S. delegation December 16–17. Following is Secretary Kissinger's statement for the opening session of the conference on December 16, together with the text of the final communique of the conference.

STATEMENT BY SECRETARY KISSINGER

Press release 612 dated December 16; as prepared for delivery

The challenge of our time is to build a stable and just international structure. This task has two principal dimensions. There is the imperative of peace—the more traditional problems of building security, resolving conflicts, easing tensions. These issues dominate the agenda of relations between East and West. No less urgent is the imperative of justice—the compelling requirements of global economic progress and social advance. These are now the major issues in the relationship between North and South. They, too, carry the potential for either conflict or order. Neither the goal of peace nor that of social justice can be achieved in isolation. We must succeed in both quests or we will succeed in neither.

Social justice and economic progress are our concerns at this conference. We meet here to launch the dialogue that has been so often urged and so long awaited. The convening of this meeting should itself be a reason for hope. For we believe it represents a commitment to the path of conciliation. It demonstrates a recognition that consumer and producer, industrial and agricultural, developed and developing, rich and poor, must together address the challenges of the global economy.

The United States will work with dedication and energy for a positive outcome. We will do so in our own self-interest and in the interest of a more just and prosperous community of nations. We will do our utmost to help mobilize the world's resources and the talents of men and women everywhere in the service of economic progress and common well-being.

In the past two years we have all learned that no nation or group of nations can solve its economic problems in isolation. In a world which is becoming increasingly interdependent, we have witnessed that inflation and recession affect us all. We have seen that no country can achieve redress by exporting its economic difficulties or by exacting an exorbitant economic price from others.

But our deepest challenge is political. Economic distress magnifies the problems of government in all our countries, clouding the prospects of social peace and democratic institutions. We have seen that national economic problems thus become international; they spawn clashes of interest and protectionist pressures that strain the fabric of collaboration even among traditional friends. We have all come to understand that, if unresolved, the competing claims of developed and developing, consumer and producer, will thwart any effort to build a stable and progressive international structure.

Our future depends now not on blind economic forces, but on choices that statesmen make. The world's nations can struggle in national or ideological contention—or they can acknowledge their interdependence and act out of a sense of community. The United States has chosen the path of cooperation.

The United States, as the world's strongest economy, has demonstrated its resilience;

we are on the road to recovery. We might best survive any new round of economic warfare. But it is my country's conviction that tests of strength benefit no nation. The approach that we took at the seventh special session of the U.N. General Assembly in September reflects our vision of a more positive future.

The special session reached consensus on an impressive range of economic problems. This commitment to cooperation can become a benchmark in human affairs—if its spirit is carried forward. We owe our people solutions, not slogans. So let us set to work. Let us implement the consensus of the special session and take up its unfinished tasks. Let us make this conference a decisive step toward their achievement.

The Road to This Conference

We are here because two years ago the international structure was gravely tested by a crisis in energy. No problem on the international agenda is more crucial to the world economy. As this conference demonstrates, it has led us to a much broader consideration of the range of related issues.

The unprecedented expansion of the global economy in the decades since World War II relied upon the plentiful supply of energy at reasonable prices. It produced economic growth, fostered industrialization, and encouraged development in every quarter of the globe.

Thus the energy crisis—caused by a combination of the 1973 embargo and the fivefold increase in the price of oil—has dealt a serious blow to global stability and prosperity.

Inflation, recession, and payments balances significantly worsened in all the industrialized world and in those developing nations which had realized substantial progress toward industrialization. The poorest of the developing countries, struggling to make modest steps toward progress, were dealt the cruelest blow of all. Their hopes for growth were, and continue to be, thwarted. Their development planning has been disrupted. Even their agricultural production has been undermined by the increased cost of petrochemical fertilizers. For the vast majority of the developing world, economic justice was poorly served.

In response to the energy crisis, the United States sought first to reach a consensus among the industrialized nations. We worked together to assure basic security against future arbitrary disruptions in oil supply and against potential oil-induced financial difficulties. We pledged ourselves to long-term cooperation in energy conservation and the development of alternative energy supplies. We agreed not to resort to protectionist measures; and we began unprecedented cooperation in our economic policies, as dramatized by the recent economic summit in Rambouillet.

These actions were not taken in a spirit of confrontation. Most are prudent steps of self-protection which have effect only if confrontation is provoked by others. Others involve an urgent program for the development of alternative sources to the benefit of all.

But the collaboration of the industrial countries has always been conceived as only part of a larger program for economic progress. From the beginning, we have foreseen an effort to develop a constructive dialogue leading to close and mutually beneficial long-term economic ties with oil-producing nations —so that our investment and technical support would contribute to their development and their prosperity would contribute to the worldwide expansion of trade and development. We recognize that the only durable basis for constructive relations is an economic system which fosters the prosperity of all. Each of us has a stake in the progress of others.

Last April, at the invitation of the President of France, we agreed to begin this discussion. The industrial nations wanted to focus on energy. The oil-producing and other developing nations wanted to give equal priority to a wider range of development issues, including prices and markets for other raw materials, and to international financial questions. The industrial nations regarded these issues as too varied and complex to be addressed effectively in a single forum.

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The April preparatory conference failed to reconcile these positions.

To demonstrate its desire for a constructive and cooperative solution the United States worked closely with other participants in developing a mutually satisfactory arrangement: energy, the concerns of the less developed countries about raw materials, development, and related financial matters would be addressed as part of a discussion of global economic problems, while maintaining enough distinction between them for a useful dialogue.

The United States is committed to a serious and wide-ranging program of cooperation with the developing world. My country understands full well, and has shown in its many proposals, that this dialogue must encompass issues of concern to all sides—including the needs of the many nations not in attendance here. For us, this clearly requires a discussion of the effects of energy prices on the world economy. For cooperation depends on mutual respect, mutual understanding, and mutual benefit.

To this end. at the seventh special session of the U.N. General Assembly three months ago, the United States made a series of proposals in several areas:

—To insure the economic security of developing countries against shortfalls in export earnings, food shortages, and natural disasters;

—To accelerate their economic growth by improving their access to capital markets, technology, and foreign investment;

—To better the conditions of trade and investment in key commodities on which many of their economies are dependent and to set an example in the vital area of food;

—To improve the world trading system and make it better serve development goals, and realize through the multilateral trade negotiations a strengthening of developing-country participation; and

—To address the especially urgent needs of the poorest countries devastated by current economic conditions.

The seventh special session ended on a note of conciliation and cooperation. The spirit of the session was carried forward to the October preparatory conference in Paris, where the declaration laid the basis for our meeting today.

This will be the attitude of the United States here. Progress has been made in many areas, and this conference must move us forward.

The Work of the Commissions

The four commissions that this conference is establishing have much work before them:

—The Commission on Energy should promote an effective world balance between energy demand and supply. It should work for practical cooperation among industrialized and developing countries to develop new energy supplies. And it should lay the foundations of a mutually beneficial long-term relationship between energy producers and consumers.

—The Commission on Raw Materials should work to establish the conditions for stable longrun supplies of raw materials vital to global progress at prices that are remunerative to producers and fair to consumers.

—The Commission on Development should strive to accelerate economic development in all nations, especially the poorest. In particular, it should bring together industrial nations and oil-wealthy nations to provide financial support for the development initiatives of the U.N. special session.

—The Commission on Finance should address financial issues as they relate to the work of the other three commissions. It should seek to strengthen the sense of shared financial responsibility for the health and growth of the international economy.

With a cooperative approach, the commissions can give direction and impetus to related activity in other forums and organizations, under whose jurisdiction a number of these issues fall. They can serve as clearinghouses for information and motivate other organizations doing similar work. They can identify areas where necessary work is not

being done and devise new initiatives where needed.

The United States will support progress on a broad range of topics in the context of the four commissions. But we have a special interest in the following areas:

—First, the price of oil and the security of oil supply as they affect the international economy;

—Second, the serious balance-of-payments problems of developing countries;

—Third, the conditions of international investment;

—Fourth, the issues of key commodities, especially food;

—Fifth, the problems of trade; and

—Sixth, the urgent needs of the poorest countries.

Let me discuss each of these in turn.

Energy

First, energy. The application of science and technology to tap the vast energy potential imprisoned beneath the earth, radiated by the sun, generated by the movement of wind and water across the earth's surface, or locked in the core of matter is fundamental to the hopes of millions to pull themselves above a bare struggle for existence. For the expansion of the global economy for both developed and developing countries depends heavily on our harnessing and efficiently employing the world's energy resources.

Some nations are particularly well endowed with these resources; some have the scientific and technological expertise to explore and utilize that potential. The international flow of energy, investment capital required to produce it, and goods produced from fuels have become in effect a global energy system which sustains all our economies. Only through international cooperation can all nations benefit from these processes and can the world economy harness its energy resources most effectively.

The United States is committed to a cooperative approach. We have much to offer. We have produced more energy than any other nation in the history of mankind, our energy science and technology are the most advanced, and we have tremendous potential for future energy development in our country and abroad. The United States also has much to gain from cooperation. Our energy needs are the world's largest; our ability to raise living standards for all our citizens depends on greater energy production and the more efficient use of energy resources.

This dialogue and this conference have these tasks:

—First, it is time to reach a common evaluation of the relationship between changes in energy prices and the stability and performance of the world economy.

The abrupt and arbitrary increase in the price of oil has been a major factor in rates of inflation and unemployment unprecedented since the 1930's. It has led to serious balance-of-payments deficits, indirectly through global recession and directly through higher priced imports.

By extraordinary effort, the industrial countries, on the whole, put their payments back in balance over the last year, although at a high cost to the well-being of their peoples. Thus the immediate burden of the massive petrodollar deficit is now borne largely by the developing countries which have little or no oil resources.

Developing countries, by definition, tend to have less of a margin to reduce consumption, to restructure energy use, or to shift to alternative sources when the oil price rises. They are the most vulnerable—and the most wounded.

A lower oil price would make possible more rapid economic recovery around the globe. It would assist the developing countries by easing their enormous balance-of-payments burden and their debt burden and increasing foreign demand for their exports. A lower price, along with stability of supply, would also benefit producer nations over the long term by easing the urgency for consuming countries to develop alternative supply sources.

Conversely, any further increase in prices would seriously hamper economic recovery, retard international trade, compound the in-

ternal difficulties of many countries, weaken the ability of the advanced nations to assist the developing, and strain the fabric of international cooperation.

It is time for a serious discussion of this issue. We are prepared to make a sustained effort to achieve understanding.

—Second, we must collaborate to find new sources of energy and intensify our conservation efforts. All consuming countries, developed and developing, must use energy more efficiently and develop more abundant supplies. Producers need to prepare their economies for the day when they will have exhausted their easily accessible oil reserves.

Individually, the industrialized countries are accelerating the development of their own energy sources. The United States is developing its conventional fuels and also new sources, including nuclear power, to replace fossil fuels. We have committed massive resources to research and devoted our best talents to this effort; we expect it to result in a substantial increase in U.S. energy production. In Europe, major efforts have been launched along the same lines, with the North Sea as the most dramatic example of the potential. The development of alternative energy sources is vital.

In the near future, the industrial countries will take the first steps toward welding these national programs into a coherent cooperative program. These programs are designed to promote conservation and to accelerate the development of alternative energy supplies through large-scale joint projects and cooperation in research and development. We will demonstrate our commitment to the maximum development of new energy by agreeing not to permit imported oil to be sold in our internal markets below a common minimum safeguard price.

This effort will bring a better balance to the world energy market. But as it gathers support, it will bring important benefits to developing as well as industrial countries. The programs that the industrial countries are undertaking, and those that many developing countries have within their potential to undertake, can lead to additional and more secure supplies of energy, which can be a spur to their prosperity and development. All nations will have access to a larger pool of energy resources, and there will be less competition for oil. The efforts of developing countries to increase their own production of energy, if supported, can be the single most important step they take to secure their development for future generations.

At the seventh special session of the General Assembly, the United States proposed an International Energy Institute. Through such an organization, the developed countries and OPEC countries [Organization of Petroleum Exporting Countries] can assist poorer developing nations to utilize energy more efficiently, increase their own production, and improve allocation and distribution of existing resources. It could identify current or new energy technologies most relevant to their special needs. The institute can help oil-producing countries to improve the use of their own energy.

Using the most advanced techniques of analysis, the institute could help assess all countries' energy resources and requirements. Staffed by experts drawn from government, industry, and academic life in both industrialized and developing countries, it could provide training for local and regional technicians or specialists in energy problems. It could become a central point of contact where policymakers and experts could exchange ideas on plans and programs.

We see the institute as a first bridge between the massive effort the industrialized countries have now launched to develop alternative sources of energy and the effort which the developing countries must now undertake.

In addition, the United States has suggested a number of other means by which the talents and experience of the developed nations, collectively and individually, can assist developing states to find and exploit new energy sources and conserve their national patrimony. We will advance these proposals in the Energy Commission. We anticipate a full exchange of views on their scope and substance.

Oil producers and nations with the tech-

nology to help develop oil resources share an interest in cooperation on conservation and exploration. But this cooperation will be easier to forge in a stable energy market with a more appropriate structure of energy prices.

—Third, the United States seeks a greater participation and contribution of the oil-producing countries in the international economy. With the extraordinary transfer of wealth that has taken place, it is in the common interest that the oil-producing nations be constructive members, not challengers, of the world economic system, that investment and the latest technology be made available to them on a reimbursable basis for their development programs, and that the flow of goods and services be enhanced between producing and consuming countries.

We believe that these three issues—a better understanding of the effects of oil price increases on the world economy; cooperation on conservation and new production; and the orderly integration of OPEC economies into the global economy—are priority tasks for the energy forum.

Balance of Payments

The balance-of-payments problems of developing countries are an immediate and urgent task for this conference to address, closely related to the energy issue. Current projections indicate that the developing world in 1976 will be collectively in deficit by about $35 billion. Bilateral and multilateral aid, along with direct investment, will finance roughly $25 billion of this. The question is whether borrowing from international capital markets can again this year make up the remainder. If not, some countries will be forced to reduce imports, cut back development programs, and further mortgage their future. The deficits of the developing countries thus could endanger not only their own well-being but also the stability of the international trade and financial system.

A multitude of ideas and proposals are already before us. Let us address steps that can be taken now.

—First, the members of the IMF [International Monetary Fund] should promptly agree on the details of the Trust Fund which the United States has proposed to furnish concessional financing for the poorest countries. It would provide these countries additional resources of $1–$2 billion a year, using the profits from IMF gold sales as well as national contributions. We are well on the way to resolving outstanding issues on IMF gold; let us take final action on the Trust Fund in January.

—Second, the members of the IMF should complete negotiations next month on the new development security facility. The United States made this major proposal to provide more substantial financing to countries facing temporary shortfalls in export earnings due to the world business cycle or commodity fluctuations. We proposed this on September 1; its realization in January would be an impressive demonstration of international resolve and responsiveness.

—Third, the IMF should approve a one-third increase in member quotas, thus expanding its potential financing for all members.

Final approval can and must be taken on each of these proposals at the meeting of the IMF Interim Committee in Jamaica in early January. Together with substantial unused regular drawings still available to developing countries, these measures will add significantly to the capacity of developing countries to sustain their needed imports and their development programs.

But however substantial these facilities, they may not be enough. Once the Trust Fund and these other proposals have been implemented in January, we must determine how best to respond to the remaining balance-of-payments problems of the developing countries. The United States is committed to finding a constructive solution.

Our specific response will depend in part on whether there is a general across-the-board financing problem or one concentrating on a few countries. One promising approach would be to expand the credit that developing countries can draw from the IMF by liberalizing the rules governing access to

regular IMF resources. The IMF Board could, for example, increase the size of each credit drawing, base them on expanded new quotas, or add a new drawing beyond those now available. Decisions on such proposals will need to be based on close analysis of their effect on the financial integrity of the IMF. Secretary [of the Treasury William E.] Simon will present our analysis and proposals for increased use of the IMF at the Interim Committee meeting.

We cannot emphasize enough the need for immediate action in this area to supplement the long-term proposals which have already been made. The responsibility does not lie with the industrialized countries alone. We cannot be expected to bear the major burdens for remedying balance-of-payments problems in which the actions of others play such a significant role. There is a collective obligation to act; there must be a joint program involving the industrialized as well as the oil-producing countries.

Investment and Technology for Development

The balance-of-payments deficits of the developing countries will perhaps moderate as the global economy recovers from recession. But sustained economic growth requires the continuous application of capital, technology, and management skills to development needs.

Private investment has always been a major factor in the growth of the global economy. My own country has benefited from foreign investment throughout its history. Today more than ever, the developing countries need this capital in addition to the limited supply of official development assistance.

To make this possible, governments of developing countries need better access to world capital markets. The United States has urged that technical assistance and expertise be provided to developing countries that are ready to enter long-term private capital markets for the first time. We have proposed a major expansion of the resources of the World Bank's International Finance Corporation (IFC) to strengthen the private sector in developing countries and to enhance their international competitiveness for private capital. We have recommended creation of an international investment trust to mobilize private portfolio capital for investment in local enterprises. And we are contributing to the work of the IMF-World Bank Development Committee to assist in removing impediments to developing countries' access to capital markets.

But we also believe that one of the most important vehicles for transferring capital, technology, and management skills to where they are most needed is private enterprise. There simply is not enough governmental capital available. Because of ideological considerations, these private enterprises operate in an investment climate increasingly clouded by unpredictable national legislation and uncertain rules of the game.

In this environment everybody suffers. Host countries are deprived of the capital resources, technology, and management which these enterprises uniquely provide, as well as a source of tax revenue. Home countries are deprived of the overseas markets, investment income, and the new ideas and techniques which come with foreign contact. And the enterprises themselves are squeezed at both ends, making overseas investment less worthwhile for them and reducing their contribution to home and host country alike and to the global product.

The United States has taken an active part in international efforts to facilitate international investment on a basis that serves the interests of all parties. We are willing to explore voluntary guidelines for the behavior of both transnational enterprises and governments. At the United Nations I stated four basic principles that should be included:

—Transnational enterprises must obey local law and refrain from unlawful intervention in the domestic affairs of host countries.

—Host governments must treat these enterprises equitably, without discrimination among them, and in accordance with international law.

—Both governments and businesses must

respect the contractual obligations they freely undertake.

—Principles for transnational enterprises should apply to domestic enterprises where relevant.

But efforts should not be limited to general guidelines for investment. Other remedial measures are possible.

Taxation is one such area. Because they operate in multiple jurisdictions, transnational enterprises may sometimes be subject to either double taxation or inappropriate tax incentives. The result in either case is that investment patterns are distorted. We must find ways to enable both host and home countries to coordinate their tax policies and make them more equitable to each other and to productive enterprises.

A second area for improvement is intergovernmental consultation on investment disputes. This is especially important to developing countries whose progress is dependent on a climate conducive to an adequate flow of investment. It is time to develop generally accepted international rules for the settlement of investment disputes and the arbitration of differences and other guidelines for dealing with problems arising between governments and enterprises. The United States recommends that the World Bank's International Center for Settlement of Investment Disputes be given a greater role in solving important investment controversies.

International assistance for development must also focus on the advancement, selection, and application of modern technology. Many countries in the developing world are already on the path of industrialization. They have proved their capacity to take advantage of the vast storehouse of modern technology. The United States encourages this endeavor. We have long been in the forefront of the effort to train more managers, technicians, and researchers in the developing countries to carry this forward.

Most technology transfer takes place through international investment and the operations of transnational enterprises on a licensing, equity, or contract basis. The United States understands the concern of many developing countries not to become the repository of obsolescent technology. Technology must be suited to local needs, the terms and conditions must be mutually acceptable, and it must be effectively managed and utilized. Developing countries must be enabled to make their own informed choices of foreign or domestic technology, to adapt it to their own needs and conditions, and to manage its application skillfully. This technology transfer requires the development of human capabilities—the management and skills that constitute the infrastructure of technological development.

People—their training and their placement in a country's management systems—are the key to making technology a producing resource. International cooperation can make no greater contribution to development than to foster the training of a corps of specialists in each country competent to select, bargain for, and manage technologies. We see this requirement as an important topic for consideration by the Commission on Development, and we will make concrete proposals to this end.

Commodities

A healthy global economy requires that both producers and consumers find protection against the cycle of raw materials surplus and shortage which chokes growth and disrupts planning. We must insure more reliable supplies of vital commodities on terms fair to all.

The problem is most urgent in food, mankind's most critical need. The cycles of feast and famine, widely fluctuating prices of basic foodstuffs, and breakdowns in the system of storage and transportation continue to afflict mankind. These show few signs of abating. And in the long run, growth in demand for food threatens to outrun the expansion of supply.

As the world's largest producer and exporter of food, the United States recognizes its special responsibility. At home, we have been committed to policies of maximum food production and have removed all production restraints; internationally, we have proposed a system of grain reserves to help moderate

fluctuations in world prices and supplies.

We believe that our grain reserves proposal can be a model for cooperation on other commodity problems. It takes into account the interests of producers and consumers. It makes special provision for the concerns of developing countries. Its reliance on buffer stocks minimizes the distortion of trade and improves the efficiency of the market. We now await the cooperation and commitment of others to help implement this proposal.

Most importantly, we are increasing our assistance to developing countries—not merely for short-term relief but to help them boost their own agricultural production. Our bilateral aid programs in this area have been expanded greatly. We also strongly support the proposal first made by oil-exporting countries for an International Fund for Agricultural Development. We have announced our willingness to make a contribution of $200 million, or one-fifth of the worldwide goal of $1 billion.

Other commodities are of critical importance to many countries, either as producers or consumers. Many developing countries depend crucially on earnings from commodity exports to lift their people above subsistence levels, to support basic social programs, and to finance the beginnings of industrialization. The solution to commodity issues will affect not only the developing countries but also the industrial countries—who are in fact the largest producers, consumers, and exporters of commodities. The economies of all countries are affected by the instabilities of the market—the vulnerability of agricultural commodities to the vagaries of weather and shifts in world demand, the sensitivity of agricultural and mineral markets to fluctuations in the business cycle in industrial countries, and the higher prices of critical energy imports.

At the seventh special session a consensus was achieved that commodity issues should be approached cooperatively. The U.S. position is that a realistic and constructive approach will require that we:

—Establish producer-consumer forums for discussions of key commodities;

—Reduce obstacles to producers' access to markets and to consumers' access to supplies;

—Rely more on buffer stocks, where feasible and necessary, in preference to restrictions on trade and production;

—Improve the productivity and marketability of agricultural raw materials; and

—Expand worldwide production capacity in other key commodities.

We now stand ready to cooperate in establishing producer-consumer forums to discuss copper, bauxite, and other commodities. We plan to address the question of supply and market access in the multilateral trade negotiations in the next several months. We have proposed that the IFC and the IBRD [International Bank for Reconstruction and Development (World Bank)] make available increased financing for mineral development and look forward to progress in the near future. We plan to support the U.N. Revolving Fund for Natural Resources Exploration. Finally, we have proposed establishment of an organization to finance and coordinate research on nonfood tropical products to improve their productivity and competitiveness.

We look forward to additional discussion of these measures in the Raw Materials Commission of this conference.

Trade

An expanding and more open international trading system is a principal factor in the growth and development of both developed and developing nations. We are committed to the strengthening of this system so it can better serve the needs of the international community and include importantly the developing nations.

Trade enables nations to earn their own way. It is most consistent with national dignity and with the efficiency of the economic system.

Over the last five years, in a major step of international cooperation, all the major industrial nations have committed themselves to establish a generalized system of tariff preferences, giving developing countries better access to the markets of all industrial nations.

The United States will implement its generalized system of preferences in two weeks' time. Under this system we will eliminate duties on 2,724 tariff items, representing some 19 percent of dutiable non-oil imports from eligible countries in 1974. This will open up significant potential new markets for the products of developing countries in the United States.

Tropical products are a promising area of export expansion for many developing countries. The international trading system should encourage this expansion. In the multilateral trade negotiations in Geneva, work is beginning on a package of tariff concessions on tropical products for early implementation. We attach much importance to this effort.

Tariff escalation—the process by which tariffs are progressively increased on goods as they move higher on the ladder of processing—is an obstacle to the exports and industrialization of many developing countries. At the U.N. special session, we proposed that reduction, or in some cases elimination, of tariff escalation be an important goal for the multilateral trade negotiations. The effort to identify and negotiate specific changes will begin next year.

This effort, however, is related in our view to the issue of access to supply of raw materials. Consumers cannot be expected to improve access to their markets for finished products if they face restrictions on supplies of related raw materials. Thus the Geneva negotiations must also improve access to supply as well as access to markets.

Reducing or eliminating nontariff barriers to trade is another major task facing the international trading community. We will make a particular effort to negotiate special and differential treatment for developing countries in this area.

An improved and strengthened world trading system would not be complete, however, if it did not insure greater sharing by developing countries of both benefits and responsibilities. Developing countries should gradually take on the normal obligations of reciprocity and trade rules as they progress.

The multilateral trade negotiations are the most effective forum for pursuing all these objectives.

The United States put forward proposals in many of these areas at the recent meeting of the Trade Negotiations Committee in Geneva as goals for 1976. The developing countries will also benefit from progress in all other areas of the negotiations, which we now hope will be completed in 1977.

The United States is committed to a role of leadership in the multilateral trade negotiations. We will seek rapid progress for the benefit of both developing and developed countries. I believe that this conference and its relevant commissions should endorse the work of the multilateral trade negotiations. It should provide continued support for the negotiations by monitoring and contributing ideas to the work in Geneva.

Global Poverty

Our deliberations here must address the plight of the one-quarter of mankind whose lives are overwhelmed by poverty and hunger and numbed by insecurity and despair. This group has suffered immeasurably from high prices of food and fuel. Their export revenues have been seriously undermined by global recession.

In these regions less than one person in five is literate; one baby in ten dies in childhood, and in some areas closer to one out of two; life expectancy is less than 50 years; and birth rates continue to be intolerably high. Public expenditures for education and health care are low—and their per capita income has been declining for the last four years.

And so today, alongside the Third World with its increasing power and assertiveness, there has come into being a fourth world, where human beings still struggle for bare existence.

In one international conference after another, we have all pointed to the fourth world with sincere intentions of giving im-

mediate help, providing long-term assistance, and devising special arrangements. We have agreed that this is a major test of a just international structure. It is time for all of us here to act on our words. Three areas need immediate action:

—First, many of the poorest cannot finance balance-of-payments deficits because they cannot gain access to capital markets or because of high interest rates on what little finance they can obtain. The Trust Fund which the United States proposed in the IMF to provide up to $2 billion for emergency relief is of special benefit to them. Let us reach a consensus to create this Trust Fund at next month's IMF meeting in Jamaica.

—The second area for immediate action is food aid. No obligation is more basic than our insuring that the poorest are fed. This fiscal year the United States expects to provide more than 6 million tons of food aid—or more than 60 percent of the 10-million-ton global target set by the World Food Conference and a 20 percent increase over last year's contribution. Others must donate their fair share.

—Third, the poorest countries need preferential and expanded access to official concessionary financial aid. The United States will do its part. More than 70 percent of our bilateral development assistance now goes to low-income countries. The concessional financing of the international financial institutions should also be expanded. At the seventh special session. my government pledged to support the fifth IDA [International Development Association] replenishment and the regional development banks. We are making every effort to secure congressional appropriations for funds already committed. We hope that the traditional and new donors will help the poorest through financial contributions to both bilateral and multilateral programs.

Let us urgently rededicate ourselves to action on behalf of the poorest among us. Such action is the responsibility of the entire world community—not just the industrial countries but also the more affluent in the developing world. While no one commission will be dealing with the totality of problems of the fourth world, each commission has a responsibility to be conscious of the need for special consideration for the poorest.

Conclusion

Ladies and gentlemen: The nations and economies of the world are many; our differences are great. But our reasons for pulling together are far greater. Therefore our dialogue here must be candid, but with a positive spirit and cooperative attitude. The prosperity, the progress, and indeed the security of the world may depend upon whether we succeed in finding realistic answers to the kinds of problems before us at this conference. For lasting peace around the globe will depend not only on containing conflict but mounting progress. It requires not merely the preservation of stability but the fulfillment of human aspirations.

The issues we face are often technical, but their implications could not be more profound. They go to the heart of our future. Only rarely in history does mankind consciously swing out from familiar, well-marked paths to move in new directions. Only rarely does humanity comprehend as clearly as we do today that change is imminent and that the direction to be taken is subject to human decision. The nations of the world face such an opportunity now.

We have the possibility of forging international relationships that will govern world affairs for the next several decades. We can bring together developed and developing, producer and consumer, in common endeavors—or we can go our separate ways, with every one of us paying the price for a lack of vision in lower standards of living and increased international tensions. Mutual interest should bring us together; only blindness can keep us apart.

The American people have always believed in a world of conciliation rather than a world

ruled by intimidation, pressure, or force. My country, in spite of its own strengths and advantages, has chosen the path of cooperation. We will remain committed to that path. But we cannot travel it alone; others will have to join us. All of us here must base our policies on the reality that we have a practical and moral stake in each other's well-being.

I am confident of our cooperation and of our success. The result will be a fair and prosperous world economy of benefit to all nations, and with it new hope, opportunity, and justice for all peoples.

TEXT OF FINAL COMMUNIQUE [1]

1. The Conference on International Economic Cooperation met in Paris at ministerial level, from December 16 to December 19. Representatives of the following 27 members of the Conference took part: Algeria, Argentina, Australia, Brazil, Cameroon, Canada, EEC [European Economic Community], Egypt, India, Indonesia, Iran, Iraq, Jamaica, Japan, Mexico, Nigeria, Pakistan, Peru, Saudi Arabia, Spain, Sweden, Switzerland, United States, Venezuela, Yugoslavia, Zaïre, Zambia. The ministerial representatives who attended the conference welcomed the presence of the Secretary-General of the United Nations.

2. The work of the Conference was opened by H. E. the President of the French Republic, Mr. Valéry Giscard d'Estaing.

3. The Hon. Allan J. MacEachen, Secretary of State for External Affairs of Canada, and Dr. Manuel Perez-Guerrero, Minister of State for International Economic Affairs of Venezuela, co-chairmen of the Conference on International Economic Cooperation, presided at the ministerial meeting.

4. The ministerial representatives at the Conference expressed their views with regard to the international economic situation. They made suggestions as to how the problems which they had identified might be resolved. Attention was drawn to the plight of the most seriously affected countries. They recognized that the Conference on International Economic Cooperation provides a unique opportunity to address these problems and to further international economic cooperation for the benefit of all countries and peoples.

5. The Conference decided to initiate an intensified international dialogue. To this end, it established four Commissions (on energy, raw materials, development and financial affairs) which will meet periodically through the coming year. It was agreed that each of the four Commissions would consist of fifteen members, ten of them representing developing countries, five of them representing industrialized countries.

6. The Commissions shall start their work on February 11, 1976. Preparation for the work of the four commissions shall be reviewed at a meeting of the co-chairmen of the Conference and of the four Commissions after consultation with the other participants in the Conference. This meeting will take place on January 26, 1976 within the framework of the general guidelines contained in paragraphs 10–14 of the final declaration of the Second Preparatory Meeting which are approved by the Conference.[2]

7. The Conference agreed that the following participants should serve on the Commissions:

—Energy: Algeria, Brazil, Canada, Egypt, EEC, India, Iran, Iraq, Jamaica, Japan, Saudi Arabia, Switzerland, United States, Venezuela, Zaïre.

—Raw materials: Argentina, Australia, Cameroon, EEC, Indonesia, Japan, Mexico, Nigeria, Peru, Spain, United States, Venezuela, Yugoslavia, Zaïre, Zambia.

—Development: Algeria, Argentina, Cameroon, Canada, EEC, India, Jamaica, Japan, Nigeria, Pakistan, Peru, Sweden, United States, Yugoslavia, Zaïre.

—Finance: Brazil, EEC, Egypt, India, Indonesia, Iran, Iraq, Japan, Mexico, Pakistan, Saudi Arabia, Sweden, Switzerland, United States, Zambia.

The co-chairmen of the Commissions will be:

—Energy: Saudi Arabia and United States.
—Raw materials: Japan and Peru.
—Development: Algeria and EEC.
—Finance: EEC and Iran.

Joint meetings of the co-chairmen of the Conference and of the Commissions may be held if the need arises.

8. It was agreed that members of the Conference who wish to follow the work of a Commission to which they do not belong should be entitled to appoint a representative in the capacity of auditor without the right to speak.

9. The Conference decided that a number of intergovernmental functional organizations which are directly concerned with the problems to be considered would be able to make a useful contribution to their consideration. It therefore invited these organizations (United Nations Secretariat, OPEC, IEA, UNCTAD, OECD, FAO, GATT, UNDP, UNIDO, IMF, IBRD,

[1] Issued at Paris on Dec. 19 (unofficial text).

[2] For text of the final declaration of the second preparatory meeting issued at Paris on Oct. 16, 1975, see BULLETIN of Nov. 10, 1975, p. 668.

SELA)[3] to be represented on a permanent basis in the relevant commissions. Their observers will have the right to speak but not the right to vote and hence will not participate in the formation of a consensus. Each commission may, in addition, invite appropriate intergovernmental functional organizations to participate as observers ad hoc in the examination of specific questions.

10. The Conference decided to establish an international secretariat with an exclusively administrative and technical function on the basis of proposals put forward by the two co-chairmen. It named Mr. Bernard Guitton [of France] as head of the secretariat and approved plans for its organization and operational procedures. The financial costs arising from the establishment of the secretariat and from future meetings of the Conference will be borne by members of the Conference on the basis of a formula agreed by the Conference.

11. It was agreed that the four Commissions should meet in Paris. Subsequent meetings of the Commissions will be convened by their co-chairmen.

12. One or several meetings of the Conference at the level of government officials may be held at least six months after this ministerial meeting. The Ministerial Conference agreed to meet again at ministerial level in about twelve months time.

13. The Conference adopted the rules of procedure recommended by the Preparatory Meeting which are based on the principle of consensus, according to which decisions and recommendations are adopted when the chair has established that no member delegation has made any objection. English, Arabic, Spanish and French are the official and working languages of the Conference. The rules of procedure apply to all the bodies of the Conference.

14. The Conference took note of the resolution of the General Assembly entitled "Conference on International Economic Cooperation" (Resolution 3515 (XXX)) and agreed to make reports available to the 31st session of the U.N. General Assembly.

15. The members of the Conference paid special tribute to President Giscard d'Estaing for the action he had taken to bring about the dialogue which is now engaged and expressed their warm appreciation to the Government of France for its hospitality and for the efforts and obligations it had undertaken in order to make the Ministerial Conference a success.

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[3] Organization of Petroleum Exporting Countries; International Energy Agency; United Nations Conference on Trade and Development; Organization for Economic Cooperation and Development; Food and Agriculture Organization; General Agreement on Tariffs and Trade; United Nations Development Program; United Nations Industrial Development Organization; International Monetary Fund; International Bank for Reconstruction and Development; Latin America Economic System.

OPEC AND U.S. POLICY OPTIONS

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A. OPEC: ORGANIZATION AND OPERATIONS

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O. P. E. C.: ORGANIZATION OF THE PETROLEUM EXPORTING COUNTRIES, BACKGROUND, REVIEW AND ANALYSIS

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O. P. E. C.

ORGANIZATION OF THE PETROLEUM EXPORTING COUNTRIES

BACKGROUND AND REVIEW ANALYSIS

Foreword

Direct intervention by national Governments in international commercial relations is neither a new nor necessarily a negative factor in the political economy of trading scarce and strategically important commodities among nations. In recent history, however, governmental intervention has been more frequently practiced by the less developed producing countries (old colonies or protectorates) as they find themselves freed politically from the old empires but still closely involved with multinational business corporations.

Examples of governmental participation in international commercial activities have been the various commodity agreements for wheat, coffee, sugar, tobacco, tin and other natural resources. The most commonly stated objective is the "stabilization" of markets by providing "fair and equitable" prices to the producers. Although varying degrees of governmental intervention have been attempted, and have partly succeeded, for copper, aluminum and iron ore, petroleum has taken the center stage of commodities traded under governmental guidance, control or monopoly.

Since its inception, the Organization of the Petroleum Exporting Countries (OPEC) has established itself as a growing power in international petroleum relations, with no counterpart among the oil consuming nations. Its success has been derived by coordinating the policies of its members, while, in their view, harmonizing the interests of producers and consumers. The group has a highly dynamic evolution in the most important industry in the world after agriculture. The purpose of this paper is to present a general picture of OPEC, while allowing the existing literature to provide more detailed historical analysis and political interpretation. A selected bibliography is provided for this purpose in Appendix C.

Introduction

The Organization of the Petroleum Exporting Countries is an intergovernmental organization with an international status. Its General Secretariat has ultimately settled in Vienna, Austria. Its official language is English.

Historically, the initial moving force in the formation of OPEC was Venezuela. At the end of World War II the international importance of the oil industry was more apparent than ever, as the scarcity of petroleum in no small measure helped to defeat the German war machine. The international oil industry began a formidable expansion as it embarked on a radical transformation. New oil fields, new petroleum technology and new oil companies appeared on the scene, while demand, in appreciable measure induced by the oil industry itself, grew by leaps and bounds. The controlling power of every major decision in the international oil business was in the hands of a relatively few individuals.

All these developments were occurring on a global basis as the United States was losing the position of the predominant exporter of petroleum and rapidly becoming a net importer. In the Western Hemisphere, after the prolonged and extremely costly experience of the nationalization of the petroleum industry in Mexico (started in 1938 but settled during the war in 1943), the Venezuelan Government embarked on a vigorous campaign for securing more control over the foreign oil companies (American, British and Dutch) for the clear purpose of obtaining from them better financial terms on their concessions. This process was for the most part through the legislative route.

In the Eastern Hemisphere, the Iranian oil nationalization failed in the early Fifties, while Iraq experienced considerable difficulties in its negotiations with the Iraq Petroleum Company (owned by American, British, Dutch and French interests). Both of these experiences played a major role in the growing

determination of the Middle Eastern oil-producing nations to assert some national rights which were signed away at the time the original oil concessions were granted. This determination was at first expressed in the publication of many articles in the local press dealing with economic problems of the industry, reflecting basically a spirit of research and objectivity along with a nascent awareness of national identity.

One extremely significant factor which influenced the post-war growth of the international oil industry was the industrial reconstruction of Europe with the aid of the Marshall Plan. World trade in oil at that time was exclusively in the hands of the seven major international oil companies (commonly known as the "Seven Sisters")[1/] who managed to increase the share of oil traded internationally from about one-sixth of total world production just before the war to more than a quarter before the Marshall Plan. The Marshall Plan needs and the subsequent economic growth of the early Fifties prompted the oil companies to develop very rapidly the oil resources in the Middle East where reserves were plentiful and production costs extremely low. This policy brought about a change in the oil epicenter by shifting the majority of world oil production outside the U.S. from Venezuela to the Middle East by 1950. It is commonly accepted now that this policy by the majors was also designed as a warning to the Government of Venezuela, whose own policy toward the imposition of heavier financial obligations on the oil companies was becoming increasingly firm.

Venezuela did not change its long-term policy, but clearly recognized the economic threat. Hence Venezuela set out to achieve a rapprochement with the

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1/ British Petroleum, Exxon Corporation, Gulf Oil Corporation, Mobil Oil Corporation, Royal Dutch/Shell Group, Standard Oil Company of California and Texaco Inc.

Middle East oil exporting countries, in order to have allies rather than rivals. Thus began a decade of establishing contacts and arranging a regular exchange of information of mutual interest pertaining to the oil experience. During this period the Middle Eastern countries also became aware of the necessity of forming a united front for the protection of their oil interests. The Arab League was active to that end but the insufficiency of an Arab group alone was very evident to the Arabs and the other oil-producers.

Meanwhile, the international oil companies displaced for all practical purposes the coal industry in Western Europe, and put substantial pressure on the British coal industry (in part resulting in its nationalization). However, they experienced political problems in the American domestic market where the American domestic oil industry wanted protection from the "cheap" foreign oil. The consequence was overproduction and a glut in world oil markets. Secret discounts and some open price cutting reduced the high earnings of the international oil companies. A prolonged state of depressed prices (and earnings) outside the United States led the majors to seek a remedy for their economic problems by resorting to the classic step of monopolistic buyers. They unilaterally cut the price paid for crude oil, without consulting the producer countries, in the Spring of 1959.

Specifically, the posted price for Venezuelan crude was reduced by 5 to 25 U.S. cents per barrel, while in the Middle East the reduction averaged 18 cents per barrel. The oil-producing countries by then had lived for some time with anxieties that such a move would be made by the majors. As a result of the cuts in the Middle East, the First Arab Petroleum Congress was assembled in Cairo to deal exclusively with Arab oil interests. Venezuela and Iran, however, participated as observers. During the intervals of the official meetings, the Saudi

Arabian and Venezuelan representatives met in frequent unofficial sessions, while consulting with all participants. The outcome of these private meetings resulted in an unpublicized understanding among all the oil-producing countries at the conference to organize into a united front. As a direct result of this understanding in principle, Venezuela and Saudi Arabia issued a joint statement in May 1960, urging all the oil-producing countries to adopt a common policy to safeguard their economic interests. In August 1960, the oil companies reduced further Middle East posted prices by 4 to 14 U.S. cents per barrel. Consultations started immediately between oil officials of the Middle East and Venezuela to consider measures for coping with price fluctuations and one month later OPEC was organized. To provide some perspective of the impact on the oil-producing countries in the Middle East, the price reduction caused them a loss of about $93 million for the year 1960, when a barrel of crude generated about 75 U.S. cents of income for the producing country and when the total oil revenue for the Middle East producers was about U.S. $1,400 million.

The birth of OPEC

The historical record shows that governmental contacts among the countries that eventually formed OPEC date as far back as 1949. In the summer of that year a Venezuelan delegation went to the Middle East for the express purpose of exchanging views on oil problems and establishing a regular and close line of communication. The Venezuelans visited every major oil producer in the Persian Gulf--Iran, Iraq, Kuwait and Saudi Arabia--which at that time produced together just about the quantity of crude that Venezuela alone was producing. The visit of the Venezuelan delegation to Egypt and Syria at the same time was indicative of its broad scope. Although neither was an oil producer, both were politically influential among the Arab group. In 1959, when the first cuts in the posted price of crude were

made by the international oil companies, the First Arab Petroleum Congress was assembled in Cairo, sponsored by the Arab League. The presence of the Venezuelan observers became critical in arriving at the understanding mentioned earlier, which can be viewed as the basis of the agreement to organize OPEC in the following year.

OPEC was established in September of 1960, following a conference held in Baghdad by the then five major petroleum exporting countries: Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. The founding members were joined one year later by Qatar, while in 1962, Indonesia and Libya joined the ranks of OPEC.

The historical factors supporting the birth of OPEC are clear. The members are all considered less developed countries; they are net exporters of petroleum and, except for Indonesia, their oil revenues constitute the majority of their foreign exchange earnings which, over the years, have been used for their domestic economic development programs. In addition, the petroleum resources in all these countries were effectively controlled by the major international oil companies whose interests did not necessarily coincide with those of the host countries. The last bonding element among the founders of OPEC was the extreme similarity of the various concession agreements so that various countries were basically facing the same controversial issues in their dealings with the oil operating companies.

In this light the creation of OPEC seems a natural and logical step among countries, continents apart, who found it useful to consult and coordinate their national policies directly related to their national income. Before the establishment of OPEC, an individual oil-producing country often found itself dealing alone with a solid front of the international majors who happened to share concessions in its territory. Moreover, since all the majors controlled substantial oil production elsewhere, they sometimes used their ability to regulate the volume of the offtake among the various producing areas as an economic weapon to influence

the policies of any individual exporting country and thus weaken its bargaining power. With regard to this tactic and other practices of the major oil companies, a substantial report was prepared by the staff of the Federal Trade Commission, titled "The International Petroleum Cartel" for a Senate Committee in 1952. (Committee Print No. 6, Subcommittee on Monopoly, Select Committee on Small Business, United States Senate, August 22, 1952, GPO).

The immediate cause that led to the creation of OPEC was, as we saw before, another in a series of adjustments in the posted price which from a high of $2.08 a barrel in 1959 went to $1.80 a barrel for Arabian light crude by 1961. Not only was it evident that the oil companies were able to change posted prices unilaterally, but they could do it without warning or consultation. The critical point was that the revenue of an oil-exporting country was then based primarily on 50 percent of the net profit of an operating company calculated on posted prices. Numerically, a country with a production of 1,000,000 b/d was losing a total of about $135,000 per day by the time all the price cuts were put into effect.

The text of OPEC's first Conference Preamble and of its first major resolutions adopted at the founding meeting in Baghdad are provided in Appendix A.

The principal stated aim of OPEC

The principal aim of OPEC as stated in the material contained in Appendix A was the restoration of the then reduced prices for crude oil to the levels preceding the price cuts through a unification of petroleum policies of the Member Countries. Corollaries to this purpose were a number of goals such as the stabilization of prices and the elimination of fluctuations, so as to insure a steady income to the producing countries. The group also envisioned an efficient, economic and regular supply of oil as a source of energy to consuming nations, while providing a fair return on the capital to those investing in the petroleum

industry. There appears to have never been a clear understanding between the oil-producing countries and the operating oil companies on what constitutes a "fair return" on investments. There is clearly no such understanding now.

The main tool that OPEC Member Countries proposed to use in their effort to force oil companies to the negotiating table in respect to oil prices was a front of solidarity that they could display if confronted with an act of economic reprisal by any of the interested companies. The lesson of Mexico's tribulations with the New Jersey Standard Oil Company before World War II, when Mexico tried to gain control of its petroleum resources, was not lost on OPEC members and was especially well learned by Venezuela.

Thus, the emergence of OPEC was a new and active element in shaping the future of the international oil industry, as has been well recognized.

The organizational structure of OPEC

OPEC comprises the following basic organs:

1. The Conference, which is the supreme authority of the Organization through the adoption of its resolutions. The Conference consists of delegations representing the Member Countries and meets at least twice a year, normally at its headquarters. When meeting elsewhere it convenes generally in the capital of a Member Country.

The Conference formulates the general policy of the Organization and determines the appropriate means of implementing it. It also decides on new memberships; it confirms the appointment of Members of the Board of Governors; and directs the Board of Governors to submit reports or make recommendations on any matter of interest to the Organization.

2. The Board of Governors, which is responsible for directing the management

of the affairs of the Organization and implementing the decisions of the Conference, consists of one Governor for each Member Country and holds its meetings at least twice a year. The Board considers and decides on any reports submitted by the Secretary General before submitting them with recommendations to the Conference. In addition, the annual budget is prepared by the Board which is submitted to the Conference for approval. Other duties of the Board are: the nomination of the Auditors, consideration of the Statement of Accounts, appointment of the Chiefs of Departments, the convening of extraordinary meetings of the Conference, and the preparation of agendas for every Conference.

3. The Secretariat, carries out the executive functions of the Organization in accordance with the provisions of the Statutes and under the direction of the Board of Governors. The Secretariat consists of the Secretary General, the Deputy Secretary General (permanently residing at the headquarters) and such staff as may be required. Its seat was in Geneva, Switzerland, but was subsequently moved to Vienna, Austria, where it has functioned by treaty with the Austrian Government since 1965.

The Secretariat's responsibility is to organize and administer the daily work of the Organization under the management of the Secretary General who is also the Chairman of the Board of Governors as well as the legally authorized representative and spokesman of the Organization. The Secretary General is assisted in his duties by the following Departments, each under the leadership of a Chief:

a) Administration
b) Economics
c) Legal
d) Information
e) Technical

In addition, the Office of the Secretary General assists him in maintaining relations with governments, other international organizations and various

delegations; it remains responsible for the enforcement of the Resolutions and it also deals with matters of protocol.

3a. The Administration Department among other responsibilities deals with personnel, budgets and accounting matters. Interestingly enough it also keeps abreast of the current administrative policies and/or policy changes taking place among the international oil companies which might affect the Organization or be of interest to it.

3b. The Economics Department reviews the economic aspects of the world petroleum industry and carries out continuing programs of economic studies for the express purpose of achieving speedy and successful results within the aims of the Organization. In this connection the work of the Statistical Unit, which collects and collates statistical information about petroleum from Member Countries, the oil industry and other sources, is of the utmost importance. This Unit is under the jurisdiction of the Information Department.

3c. The Legal Department reviews the legal aspects of the world petroleum business undertaking special legal studies consonant with achieving the best interests of the Member Countries within the framework of existing laws.

3d. The Information Department maintains an Information Center including a comprehensive Library with a vast documentation center. The Library is reputed to be the best in the world on petroleum matters. It is the function of this Department to establish the proper procedures for the most efficient utilization of its resources for the benefit of Member Countries and the public at large.

3e. The Technical Department reviews the technical aspects of the world petroleum industry carrying out studies of technical and technological content aimed at the realization of the goals the Organization has undertaken to pursue.

The staff of the Secretariat consists of international employees with an

exclusively international character. In the performance of their duties OPEC's employees are charged neither to seek nor accept instructions from any government or from other authorities outside the Organization, their sole purpose being to serve the interests of OPEC's policies.

4. The Economic Commission. In 1964, during its Seventh Conference, OPEC established the Economic Commission with statutes of its own. The rationale for the formation of this organ can be found in the declining prices for petroleum while the price for manufactured goods had continued to increase. 2/ It was felt that the decreases in petroleum prices were contrary to the basic interests of Member Countries and resulted in a further deterioration of their terms of trade, i.e. the relative amount of exports needed to acquire a given amount of imports, which in periods of inflation tends to work in favor of the raw material importers and not exporters. OPEC members at that time concluded that "market forces" were not restoring the balance between supply and demand in oil, and considered it vital to establish a specialized body to examine the position of petroleum prices on a continuing basis, while studying all factors that influence oil prices and their structure.

The Commission consists of a Board, a Staff and National Representatives. The National Representatives are permanent liaison officers between the appropriate petroleum authority in their respective countries and the Commission Coordinator (who is ex officio the Chief of the Economics Department).

What makes this Commission unusual is that its representatives tend to be persons from the highest leadership of the various National Oil Companies of the member countries who, through their devices or the good offices of their central

2/ (OPEC), Resolutions of the Seventh Conference held in Djakarta from 23rd to 28th November 1964.

governments, are directed to obtain all relevant data and information from private and public sources, but especially from the oil companies engaged in export petroleum trade from their respective territories. All this was done in pursuit of the stated functions of the Economic Commission. Further, the Commission makes monthly reports and its activities are reviewed at every Conference. No clear details of the Commission's reports are available to the Congressional Research Service, but from fragmentary references in various private newsletters and other oil industry literature it appears that no major decision since 1970 has been taken by an OPEC Conference without a solid support on economic grounds prepared by this Commission.

A chart showing the organizational framework of OPEC is provided in Appendix B.

The legal framework of OPEC's activities

The fundamental premise of all OPEC Member Countries is that the State is the owner of all mineral resources. Some countries--Indonesia, Iran, Libya and Venezuela for instance--have enacted specific legislation setting conditions under which the State may enter into contracts or grant concessions. In the case of Venezuela the legal basis for the State's ownership of all mineral rights resides in the Napoleonic Code which prevails generally in Latin America. Other Member Countries have granted concessions without the legal basis of specific hydrocarbon laws but under general laws of the land.

The earliest concessions granted by the current OPEC members were negotiated under circumstances wherein the signatory governments did not foresee the full economic and legal implications of the agreements, particularly in the long-run, given the long life of concession agreements. In some cases the exercise of

foresight was totally absent, because of ignorance or collusion.

The early attempts to revise the old concession agreements through renegotiation were slow and generally unproductive. Recently, however, considerable movement has been achieved. Real and fundamental changes have been brought about by the oil-producing countries' invocation of the doctrine of "changing circumstances." This meant that a Government told the operating oil company in no uncertain terms that if it wished to continue its operations it had better sit down to renegotiate an oil production agreement. In some cases, changes in the terms of concessions have been implemented through new legislation.

Until 1972 OPEC members felt strongly that there still were issues to be resolved in their relations with the oil operating companies, so that they could introduce benefits which have been common practice in some of the consuming as well as producing countries.

The most notable issues in contention before 1972 were:

1. The duration of the major concessions in force, particularly in the Middle East. The stumbling block of this issue was substantially overcome by the 1972 negotiations leading to the so-called Participation Agreements, some of which went into effect January 1, 1973. In these agreements the Government of a producing country in the Middle East acquired a 25 percent equity in the assets of the oil producing company or companies operating in its territory for an agreed compensation. Such equity generally was assigned to an existing National Oil Company which became owner and administrator of these assets. By the summer of 1974, the original Participation Agreements were almost in total disarray; certain oil-producing countries had achieved a legal ownership of 60 percent of the operating companies' assets, while in other countries current negotiations are expected to lead to a 100 percent takeover with a concurrent service contract negotiated

with the ex-operating companies. The present situation is extremely fluid in this area.

2. Royalty as a credit against income-tax liability. Of the various petroleum revenues of an oil-producing country, royalty and income tax are the two most important. Royalty is the payment that a concessionaire pays to the state for the right to exploit the mineral resources. Income tax, on the other hand, is a distinct item of liability levied directly or indirectly by a sovereign state on the income of an individual or company within its jurisdiction, generally based on net income or profit. In the oil-producing countries it was entirely based on the realization of profits, and was not related to the payment of royalties which are payable even in the absence of a profit (an unlikely situation in the oil industry). In the Middle East, royalty payments used to be credited directly against the income tax liability, which made its mathematical computation meaningless. OPEC negotiations remedied that situation so that, in all member countries now, royalty payments are deducted as an expense item before the income taxes are calculated.

Current trends suggest that before the end of 1975 royalties and taxes are going to be merged into a single package of financial obligations by oil companies to the governments. In correct fiscal terminology payments by the oil companies to the Governments of the producing countries, since the organization of OPEC, have not been "income tax" payments but straight excise or sales taxes. The term "income taxes," however, resulted in substantial benefits to the international oil companies in offsetting their home country income tax liabilities, generally on a dollar per dollar basis.

3. Legislative action to change tax laws. In a sovereign state, the Government may pass laws imposing or changing the rate of taxes within the

Constitutional limitations. But in the Middle Eastern countries the income tax rate was fixed for the duration of the concession irrespective of the rate of profitability of the oil industry. A clause in the concession agreements precluded the establishment of a progressive system of taxation on petroleum profits.

Alterations in all these areas have been secured, but again the fluidity of the current international oil situation does not preclude yet other changes. In this respect it should be noted that, in the recent highly concentrated North Sea oil exploration, the Governments of Great Britain and Norway (not OPEC members) have instituted obligations on the operating oil companies much stiffer than those currently in force within OPEC producing countries, perhaps with the exception Indonesia, Iran and Venezuela. This is a generalized statement because only fragmentary information is known about all the developments in the relations between Governments and oil companies (inside or outside OPEC) dealing with exploration, production or service contracts. The oil industry and governments remain secretive in these matters.

OPEC and its relation with U.N. agencies

In accordance with Article 102 of the United Nations Charter, the agreement creating OPEC was properly registered with the Secretariat in New York on November 6, 1962, under order No. 6363.

Two and a half years later, in the summer of 1965, OPEC was officially recognized by the United Nations as an intergovernmental organization. In July 1965, the primary organ of the U.N. for discussion of economic and social questions ECOSOC (the Economic and Social Council), adopted a Resolution establishing relations with OPEC. As a result of that recognition by the United Nations, the OPEC Secretariat was invited to and has actually participated in meetings of many spe-

cialized agencies and important international organizations, among them UNCTAD (United Nations Conference of Trade and Development), ECAFE (Economic Commission for Asia and the Far East), ECLA (Economic Commission for Latin America), and ECA (Economic Commission for Africa).

The world oil situation in 1960

Total world crude oil production in 1960 was estimated at about 21.0 million barrels per day (b/d) of which 17.7 million b/d was produced outside the Communist bloc. Only 10.1 million b/d was lifted in the world outside North America and the Communist bloc countries. The founding members of OPEC produced about 7.8 million b/d or about 44 percent of all crude lifted outside the Communist bloc, and about 77 percent outside of North America and the Communist bloc. It should be noted that the major oil companies at that time controlled virtually all the production of crude oil in the five countries in question, while these oil companies taken together were producing about 69 percent of the volume of crude extracted in the whole world, or about 82 percent of that produced in the non-Communist areas of the world. None of the majors had any interests in the production of oil in Communist countries.

The importance of the founding members of OPEC to the international oil industry was also evidenced by the fact that in 1960 the five founding members of OPEC combined furnished nearly 90 percent of crude entering international trade channels, while holding some 67 percent of the then known and recoverable oil reserves of the world.

OPEC in 1974

As with any other organization, OPEC's structure has evolved through the

years. Since Libya and Indonesia joined OPEC in 1962, bringing the membership to eight, five additional members have been accepted. Acceptance into membership requires a three-fourths' majority vote including the concurrent vote of all Founder Members. Thus any Founder Member has the power of veto over new memberships. Qualifications for membership are a substantial net export of crude oil and a fundamental similarity of interests to those of Member Countries.

Participants within OPEC may be:

FOUNDER MEMBERS, if they signed the original agreement;

FULL MEMBERS, if accepted into OPEC by a Conference;

ASSOCIATE MEMBERS, if unqualified for full membership but still accepted by a Conference, without the right to vote but all other benefits and privileges;

CANDIDATES, if an application for membership is pending; and

OBSERVERS, if they are invited to the proceedings of a Conference.

The following are dates and places of accession of members after the founding of OPEC:

January 15-21, 1961 in Caracas for Qatar
April 5-8, 1962 in Geneva for Indonesia and Libya
November 27-29, 1967 in Vienna for Abu Dhabi
July 8-9, 1969 in Vienna for Algeria
July 12-13, 1971 in Vienna for Nigeria
November 19-20, 1973 in Vienna for Ecuador, while Gabon became an associate.

In January 1974, the membership of Abu Dhabi was extended to the United Arab Emirates of which Abu Dhabi is a principal member.

During 1974 various newspaper accounts indicated that the following countries have been either observers, or have pending applications or are rumored as potential candidates for OPEC: Bolivia, Colombia, Congo, Malaysia, Norway, Peru and Trinidad.

Gabon became a full member at the OPEC meeting of June 9 - 11, 1975.

The world oil situation in 1974

A whole book would not be enough to describe fully the current involved and tension-generating situation in the field of international petroleum relations. This brief section, by necessity, will highlight some comparisons with the previously described oil situation in 1960.

Current levels of crude production worldwide, although more uncertain than in any previous year because of production cutbacks designed to support high prices, indicate that in 1974 there will be a global crude oil production between 55 and 57 million barrels per day or between about 2,740,000 and 2,840,000 million metric tons (the usual denomination used internationally). This represents a jump of about 170 percent in the past 14 years. Within this global increase, the rise in the non-Communist areas was about 70 percent, while the Communist bloc increased its production about 300 percent over the same period. The Free World production of crude oil, however, accounts for about 82-83 percent of the world's total, with an increasing proportion being produced in the Middle East.

OPEC members, as a whole, are now providing about 85 percent of all crude oil sold internationally, but only about 40 percent of world crude production is sold in countries other than those in which it is produced. Noting that crude oil produced in the United States, Canada and the Soviet Union and consumed domestically in the three respective markets amounts to about 35 percent of total world's production, the geographic imbalance of crude supply and demand becomes very evident. Only about a quarter of world production is domestically produced and consumed by all other 135 nations or so currently comprising the roster of the United Nations. This fact underlies the massive economic imbalances resulting from the sudden and sharprise in world oil prices with which every industrial nation (and most less developed nations) is wrestling.

We are unable to estimate the share of 1974 world crude production that the major oil companies control, comparable to their 1960 experience of extracting almost 70 percent of the world's output. A study conducted this spring by this author indicates that the seven "majors" still controlled an estimated 46 percent of the 1973 crude production. The fast changing situation concerning the equity participation of various oil companies operating in the Middle East, and the varying forms of service contract under which the international oil companies produce crude in other countries, will completely change the meaning of control of crude production by the majors. In the future, the parameter that may become useful in analyzing the international oil situation, in terms of production control and market availability of oil in general, will be the ability of the various international oil companies to have access to crude rather than produce it, and to have the means of moving it into owned or controlled downstream operation, where the emphasis of profitability has already been shifted.

This has occurred in spite of a myriad of regulations that currently exist in the petroleum markets and industry. The giant oil companies still have a visible upper hand over independents or newcomers in the industry and strength with consumer governments.

A brief review of major OPEC's accomplishments

We have reviewed earlier the proclaimed goals of OPEC. In the past dozen years the following are its major achievements:

* It checked further unilateral price reductions by the oil companies, by playing an important role in stabilizing posted oil prices until the summer of 1972.

* Spearheaded by Venezuelan and Libyan national actions, it contributed

to agreements with oil companies, providing for higher crude oil prices and a higher income tax rate, especially since 1971.

* It focused on the international rate of inflation especially after the 1971 devaluation of the U.S. dollar, and achieved some compensation for inflation in the price for crude oil.

* It secured from the oil companies after the two devaluations of the U.S. dollar compensation for the eroded value of oil-producers' international reserves held in U.S. dollars by means of an adjustment of the dollar revenues for oil mostly used to purchase goods in the Western World markets.

* It helped to overcome a strong resistance by oil companies to the elimination of the tax practice in some OPEC countries of treating oil royalty obligations as credits against their income taxes. Since then royalty has been effectively paid as a separate item and is considered just another expense of the cost of operations.

* It was inatrumental in negotiating the virtual elimination of a "marketing allowance" (largely claimed costs of marketing crude in markets outside the oil-producing countries) which the oil companies had used as a "cost" of crude production in determining their local tax liabilities. OPEC's argument was that a large portion of such costs consisted of promotional expenses outside the host countries and in addition generated international profits which totally escaped the tax system of the host countries. OPEC auccessfully argued that such costs be assigned to stages subaequent to crude production.

* It haa worked on plans for the adoption of identical principles to become part of Member Countries' domestic legislation concerning laws regulating hydrocarbons.

* It has been helping Members in assessing and analyzing conditions in the international petroleum field, while it has trained nationals in the technical

and economic aspects of the oil industry.

* It has participated actively in international proceedings dealing with the oil industry.

* It adopted a Resolution, in the form of a "Declaratory Statement of Petroleum Policy in Member Countries" embodying the principle that in the producing countries the ownership of operating companies will be in the hands of the State.

* It has assisted the National Oil Companies of Member Countries in various activities of economic coordination.

* In the Summer of 1968 it agreed on principles of general conservation of petroleum presenting its case in a booklet titled "A Pro-Forma Regulation for the Conservation of Petroleum Resources." (This booklet was reprinted in January of 1973.)

* It became instrumental in providing the framework within which pressure from Middle East oil producers was translated into a tripling of the so-called transfer price of crude oil from producing companies to refineries between October and December 1973. Although these price changes were never uniform because of regional differences among OPEC members, this achievement provided increasing economic wealth to basically less developed countries with a concurrent increase in their diplomatic power.

Currently the two hottest issues being debated within OPEC are: the international price of oil (inevitably related and connected with world inflation) and the coordination of any cutback in production to manage real and potential surpluses of crude in the world markets.

Completely outside of OPEC, but not less important than any issue under consideration in OPEC councils, is the new arrangement being negotiated between the Saudi Arabian Government and ARAMCO officials. ARAMCO (Arabian American Oil Company owned by four U.S. oil companies) is almost the sole producer of crude oil in Saudi Arabia which is recognized in and out of OPEC to be the keystone to the international oil industry. The importance of what Saudi Arabia will arrange

with ARAMCO cannot be underestimated, especially in view of the news just released by a private petroleum newsletter, that had it not been for the Saudis' strong opposition to a price increase, the OPEC group would have likely increased the crude price "50 percent higher" during the last several Conferences. This information is attributed to the U.S. Ambassador to Saudi Arabia, James E. Akins, who prior to his appointment to that country was the Director of the Office of Fuels and Energy at the U.S. Department of State.

An overview of OPEC

It is no trifling task to analyze the impact of OPEC in economic terms, and the attendant political content makes the task controversial. This report attempts to recognize salient points concerning OPEC from an international viewpoint.

OPEC follows a broad definition and framework employed in the creation of numerous other international organizations. One such group that has been examined frequently is the European Coal and Steel Community (ECSC). The word "community" could as well be Communauté, Gemeinschaft, Communità or Organization. In the definition of the ECSC "community" means first and foremost an original, realistic and pragmatic method of economic cooperation between states. According to ECSC, the scope of such an organization takes into account at the same time power relations between states as well as the necessity to offer some guarantee to small states against subordination to big states, while keeping open channels for common and dynamic economic action.

From the legal viewpoint, cartels may be formal or informal, loose or closely knit, broad or narrow in scope; they may consist of business enterprises or governments. Their existence does not necessarily have to eliminate competition. It is sufficient that an arrangement should be made to lessen competition

in the form of restrictive pricing, output, investment, employment, trade or some other aspect of business policy in order to qualify as a cartel. OPEC in this respect is a cartel; so is the international oil business.

If one attempts to sort out the complex and often confusing reality of international oil economics and politics, a historical conflict becomes evident. Defensive forces are at work in the oil companies group (trying to retain the status quo), while among the producers there is a process of dynamic change (trying to forge new power bases). Yet while OPEC is a cartel as far as its objectives are concerned, it is a loosely knit one with respect to its collective or central decision-making power. Its looseness assisted OPEC's survival and the avoidance, so far, of defections. Moreover, the original scope of OPEC was, and has remained, narrowly confined to its original objectives in a framework of differing individual members' needs and requirements which have precluded the widening of OPEC's scope or the tightening of its decisions. OPEC does not have sufficient delegated power to act as a supranational authority, and it is doubtful if OPEC's Member Country Governments are willing to relinquish to OPEC the main responsibility for controlling prices and production of crude oil. Yet the competent work performed by the Secretariat appears to have won wide acceptance among less developed oil-producing countries, given the current roster of OPEC and the potential candidates for membership.

The strongest bond that seems to exist among all OPEC members is that they depend on oil--to varying degrees of course--as a foreign exchange earner and as a major factor in state revenues. OPEC countries' prosperity is generally affected by the export conditions of one or two commodities, and therefore there is some rationale in their attempt not to leave their economic fate to the vagaries of competition where its level is not set by buying consumers but by a small group

of giant companies effectively controlling the market.

This evaluation, however, does not preclude the recognition of a certain degree of politicization of the world petroleum trade. But the main activities in this area are to be found on the home fronts or within the Arab group of oil producers, outside the OPEC framework. The fact that most of these political activists are also OPEC members and the fact that they assemble in their outside-of-OPEC meetings, often concurrently with OPEC gatherings, makes for a confused understanding and reporting of developing events by the newspapers. It should be noted, however, that most of the economic data and analysis that is being used by individual countries within the OPEC membership on their home fronts or in their diplomatic exercises is provided by the studies undertaken under the auspices of OPEC itself. This situation has been clearly recognized in certain statements by the Shah of Iran, the Petroleum and Finance Minister of Kuwait, the Mines Ministry of Nigeria and Chairman of its state oil company, and other high-ranking governmental officials of the oil-producing countries, when they take issue with the evaluation of world petroleum events as painted by interests close to or identifiable with the international oil companies group.

The geographic distribution of OPEC membership bears examination. It remains a fact that the gravitational center of OPEC is in the Middle East. This part of the world emerged from political colonialism only to find itself economically dominated by the Western powers. Combining the old troubles characteristic of the Middle East (similar to the historical position of the Balkans as a source of worldwide difficulties) with the rapid emergence of the Middle East as the major oil exporting area in the world, the results must be acutely unsettling. In the first place the Middle East oil situation developed because of its vast reserves and the very low production cost of lifting crude in quantities vastly

larger than anything the region can consume. Secondly, the growing economic importance of the Middle East is emerging under an umbrella of revived efforts at cooperation schemes designed to promote local and regional economic development of the area. Lastly, the political economy developing in the Middle East is neither fully accepted by the generally conservative oil companies managers, nor it is palatable to the Western consuming public. The consumers feel injured and impotent after the international oil industry cartel accustomed Western economies to cheap and abundant oil. OPEC, to be sure, is not the central protagonist in all these events, but the Arab contingent of OPEC, with support from Iran, are the principal powers, and it is the coordination of their actions that gives it potency. Yet in this area too the current situation is fluid.

As for military considerations, the oil producers have been extremely aware of the economic and strategic importance of petroleum to Western military and civilian uses. The volume and value of international petroleum trade is staggering in comparison to any other commodity. This situation has been reflected in the most recent preliminary assessments by the World Bank Group and the Organization for Economic Cooperation and Development (OECD).

Has OPEC achieved its original goals? In the fourteen years of OPEC's existence it is abundantly clear that the Secretariat, in representing the interests held in common by member states, has been effective. A close examination of historic events surrounding the birth and later the existence of OPEC shows also that the group has been exposed to identifiable common threats by a few companies that held control of oil supplies and markets. This contributed in no small measure to a sense of community within OPEC and endowed its leadership with a momentum of its own. In the overall performance, however, the achieved results have fallen short of stated aims. In this connection it may be useful to suggest

that although in absolute terms the organization has not achieved its proclaimed goals, it has indeed achieved results that are more than adequate, by its having pragmatically settled for less ambitious but more realizable plans.

Following the international developments in this area, one is confronted by an almost endless series of "claims" by the various interested parties which are passed as "facts". Much of the published and some of the unpublished material, including interviews, tends to be pleadings rather than expositions or explanations. Commercial oil spokesmen appear to have a proclivity to state facts and analyses, the "proof" of which is kept secret at the parent company's home office. Similarly, listening to a poltical leader of an oil-producing nation (and of some consuming countries), one has to take account of his ideology in order to understand his economics. The whole area of international petroleum not only raises a large number of complex questions; but almost all of the issues tend to be controversial for they affect not only the pocketbooks of the oil industry, but the fortunes of both the poor and the rich among the consuming nations.

A selected bibliography is provided in Appendix C.

A quick reference table of the main characteristics of the political, economic and social profiles of OPEC members is included in Appendix D.

Concluding observations

* The deterioration of results for international oil companies (and in a way for the average consumer of petroleum products) in their negotiations concerning international petroleum affairs can be directly related to the existence of OPEC in general. A major impact seems to derive from the service OPEC provides in training nationals of Member Countries in major economic and technical issues

concerning the oil industry. After these nationals return to their homelands armed with vastly increased knowledge and understanding of global oil economics, they are able to match the experts of the international oil companies in negotiations. A similar trend has existed in higher education with Western countries, notably the United States and Great Britain but also France, Germany and other industrial countries, offering opportunities to many nationals of the oil-producing countries. Most of these persons with their newly-acquired education in economics, political science, industrial management and other technical skills return home to significant positions of responsibility in the growing local governmental corps of civil servants and political appointees. They are versed in Western languages and international petroleum affairs, while retaining their domestic socio-political outlook. A Harvard-trained administrator working for an American oil company does not enter negotiations better equipped than a Harvard-trained administrator running an agency of an Arab government. The facts of today's petroleum economics are no longer in the hands of the former select few.

* Although inflation, national or global, has no direct relationship to this report, the international debate about how much petroleum prices have contributed to the inflation rate of various countries, makes the relationship real though indirect. Global political power has been diluting almost in direct proportion to the various rates of national inflation when world problems of global import are discussed in international councils. To judge from the gloomy pronouncements which emerged from the annual IMF-World Bank meetings last month, the main preoccupation of Western policy-makers is with mounting economic problems, all of these centering on the seemingly insoluble difficulties of inflation/oil prices/balance of payments. Everyone is asking how much the rise in oil prices has contributed to world (or national) inflation. But there are no authoritative

national or international analyses of that subject. Work done by the World Bank Group and the OECD has focused on the money value of international oil transactions, with an occasional attempt to evaluate the balance of payments implications. But the problem of oil and inflation is so massive, so new and so unquantifiable as to defy precise analysis. The main difficulty, as it was pointed out by the OECD, is that any fundamental research on this subject is hampered by a lack of the requisite data.

* Another visible effect of OPEC's existence has been on the attitude of the major oil companies in dealing with individual host countries. Just as the companies have been rigid in their dealings with OPEC as a group, so they have demonstrated by and large an accommodating attitude and flexibility toward some host countries. It would seem that the companies' managers have been anxious to impress on the Governments of the host countries that their interests lie in direct negotiations with the company rather than the collective action within the OPEC framework. The oil companies have appeared to identify OPEC as their proverbial boulder in the middle of a road which it is prudent to go around, rather than try to push out of the way. Perhaps the boulder is too big to be moved without breaking it up. As yet neither diplomacy nor modern technology has produced the means to break up OPEC. It is true, however, that OPEC could break itself up if it undertakes ventures wherein conflicting interests of its constituents cannot be reconciled.

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Appendix A

THE ORGANIZATION OF PETROLEUM EXPORTING COINTRIES

Preamble

By invitation of the Republic of Iraq, the Conference of the Petroleum Exporting Countries, composed of representatives of the Governments of Iran, Iraq, Kuwait, Saudi Arabia and Venezuela, hereafter called Members, met at Baghdad from the 10th to the 14th September, 1960, and having considered :

That the Members are implementing much needed development programmes to be financed mainly from income derived from their petroleum exports :

That members must rely on petroleum income to a large degree in order to balance their annual national budgets ;

That petroleum is a wasting asset and to the extent that it is depleted must be replaced by other assets ;

That all nations of the world, in order to maintain and improve their standards of living must rely almost entirely on petroleum as a primary source of energy generation ;

That any fluctuation in the price of petroleum necessarily affects the implementation of the Members' programmes, and results in a dislocation detrimental not only to their own economies, but also to those of all consuming nations

Have decided to adopt the following Resolutions :

Resolution I.1

1. That Members can no longer remain indifferent to the attitude heretofore adopted by the Oil Companies in effecting price modifications ;

2. That Members shall demand that Oil Companies maintain their prices steady and free from all unnecessary fluctuations ; that Members shall endeavour, by all means available to them, to restore present prices to the levels prevailing before the reductions ; that they shall ensure that if any new circumstances arise which in the estimation of the Oil Companies necessitate price modifications, the said Companies shall enter into consultation with the Member or Members affected in order fully to explain the circumstances.

3. That Members shall study and formulate a system to ensure the stabilization of prices by, among other means, the regulation of production, with due regard to the interests of the producing and of the consuming nations and to the necessity of securing a steady income to the producing countries, an efficient economic and regular supply of this source of energy to consuming nations, and a fair return on their capital to those investing in the petroleum industry.

4. That if as a result of the application of any unanimous decision of this Conference any sanctions are employed, directly or indirectly, by any interested Company against one or more of the Member Countries, no other Member shall accept any offer of a beneficial treatment whether in the form of an increase in exports or an improvement in prices, which may be made to it by any such Company or Companies with the intention of discouraging the application of the unanimous decision reached by the Conference.

Resolution I.2

1. With a view to giving effect to the provisions of Resolution No. 1, the Conference decides to form a permanent Organization called the Organization of the Petroleum Exporting Countries, for regular consultation among its Members with a view to coordinating and unifying the policies of the Members and determining among other matters the attitude which Members should adopt whenever circumstances such as those referred to in Paragraph 2 of Resolution No. I. 1 have arisen.

2. Countries represented in this Conference shall be the original Members of the Organization of the Petroleum Exporting Countries.

3. Any country with a substantial net export of crude petroleum can become a new Member if unanimously accepted by all five original Members of the Organization.

4. The principal aim of the Organization shall be the unification of petroleum policies for the Member Countries and the determination of the best means for safeguarding the interests of Member Countries individually and collectively.

5. The Organization shall hold meetings at least twice a year and if necessary more frequently in the capital of one or other of the Member Countries or elsewhere as may be advisable.

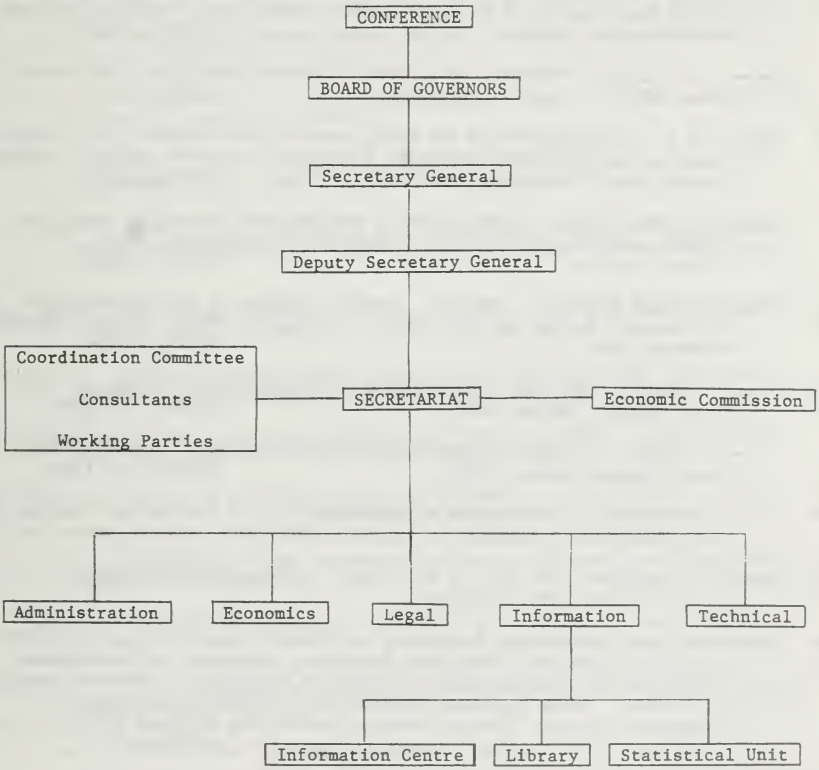
6. *a)* In order to organize and administer the work of the Organization there shall be established a Secretariat of the Organization of the Petroleum Exporting Countries ;

b) A subcommittee of not less than one member from each country shall meet in Baghdad not later than the first of December 1960 in order to formulate and submit to the next Conference draft rules concerning the structure and functions of the Secretariat ; to propose the budget of the Secretariat for the first year ; and to study and propose the most suitable location for the Secretariat.

Appendix B

THE ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES

(OPEC)



D. Scuka, Oct. '74, [illegible] - Eco.Div.

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SELECTED DATA OF A SOCIAL, POLITICAL AND ECONOMIC PROFILE OF O. P. E. C. MEMBERS

ITEM	Algeria	Ecuador	Gabon	Indonesia	Iran	Iraq	Kuwait	Libya	Nigeria	Qatar	Saudi Arabia	United Arab Emirates	Venezuela
Area (000 Sq. miles)	920	196	102	735	636	168	8	680	357	4	873	32	352
Estimated population (1971-72 in million)	14.8	6.5	0.5	119.2	30.3	9.8	0.9	2.0	65.9	0.1	8.0	0.2	10.7
Urban population as % of total	43%	30%	19%	17%	41%	47%	60%	27%	23%	68%	24%	52%	68%
Continent	Africa	S. America	Africa	Asia	Asia	Asia	Asia	Africa	Africa	Asia	Asia	Asia	S. America
Language	Arabic	Spanish	French	Bahasa Indonesia	Farsi/ Persian	Arabic	Arabic	Arabic	English	Arabic	Arabic	Arabic Abu Dhabi	Spanish
Capital City	Algiers	Quito	Libreville	Djakarta	Tehran	Baghdad	Kuwait	Tripoli	Lagos	Doha	Riyadh		Caracas
Year of independence	1962	1830	1960	1949	1906	1932	1961	1951	1960	1971	1932	1971	1830
Diplomatic relations with U.S.	no	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
Monetary unit	Dinar	Sucre	CFA Franc	Rupiah	Riel	Dinar	K. Dinar	L. Pound	N. Pound	Q.D. Riyal	S. Riyal	B. Dinar	Bolivar
GNP, 1972 (U.S. million $ equivalent)	6,950	2,014	488	10,620	17,400 1/	4,650	4,225	4,583	8,650 1/	NA	5,250 1/	NA	13,140
Industrial activity as share of total GNP	NA	18%	25%	16%	34%	40%	64%	63%	16%	NA	57%	NA	40%
GNP per capita in dollars - 1972	469	309	970	84	542	465	5,280	2,262	150	NA	920	NA	1,166
Total exports, 1973-(million U.S. $)	1,805	558	280e	3,062	6,943	2,292	3,790	3,600e	3,384	450e	7,600e	1,500e	4,000e
Total imports, 1973-(" " ")	2,342	517	166e	2,780e	3,400e	898	1,042	1,904	1,876	180e	2,000e	878e	2,950e
International reserves end 1972-(million U.S. $)	493	143	23	574	960	782	363	2,925	385	NA	2,500	NA	1,732
International reserves end 1973-(million U.S. $)	1,134	241	48	807	1,237	1,553	501	2,127	592	NA	3,877	NA	2,420
U.S. foreign aid to: FY 1972-(million U.S. $)	21.9	12.5	0.1	270.7	159.2	0.3	--	2/	39.9	--	13.9	--	53.4
U.S. foreign aid to: FY 1973-(million U.S. $)	187.8	17.8	0.1	331.8	283.2	0.3	--	--	15.3	--	0.2	--	27.4
Oil exports value as percentage of total exports - 1972 %	85	17	60e	51	92	93	95	99	83	99e	99e	80e	93
- 1973 %	88	45	65e	49	91	95	92	98e	83	99e	99e	85e	91e
- 1974 %	90e	55e	80e	70e	95e	98e	95e	95e	90e	99e	99e	90e	93e
Motor vehicles (in thousands, 1971)	260e	70e	11e	385e	410	116	165	160e	112	NA	125e	NA	800e
Telephones per thousand persons	1.3	2.4	1.4	0.2	1.1	1.2	8.8	2.0	0.1	13.1	1.0	7.1	4.2
Radio sets per thousand persons	52	279	124	114	93	180	132	45	27	NA	11	NA	163
TV sets per thousand persons	7	25	2	1	9	5	144	1	1	NA	1	NA	82
Net calories per capita/day available	1,890	1,890	2,180	1,930	2,030	2,050	NA	1,730	2,440	NA	2,080	NA	2,180
Population per physician (in thousand, period 1969-71)	8.2	2.9	5.1	27.7	3.1	3.3	1.1	2.6	20.5	1.0	11.0	NA	1.1

NA - not available
e - estimated

General note: For data that do not and cannot change substantially in a few years we have used the latest figures available without specifying what year for each individual entry. Any possible difference in magnitude of such data is statistically negligible.

1/ Other than Gregorian calender year.
2/ Less than $50,000.

Sources: United Nations, World Bank Group, Departments of State and Commerce, CRS estimates.

S. Docs. Oct.'74, CRS - Hous. Pub.

The OPEC Process

(By Zuhayr Mikdashi)

In September 1960, five leading oil exporting countries—three Arab (Iraq, Kuwait, and Saudi Arabia) and two non-Arab (Iran and Venezuela)—founded the Organization of Petroleum Exporting Countries (OPEC) as an intergovernmental, interregional organization, the purpose of which was the protection of their common oil interests, especially prices and oil-export revenues. The transnational oil companies, which had the power to fix oil-export prices prior to September 1960, reluctantly accepted the OPEC governments as partners in the pricing process.

The immediate issue that had brought the OPEC governments together that September had been their refusal to accept the cuts in posted prices that had been initiated for tax-reference purposes by the transnational companies in August. The OPEC governments began by passing resolutions and issuing statements protesting the companies' action and calling for the restoration of prices to their pre-August levels. But neither these strenuous governmental protests nor subsequent protracted negotiations with the transitional enterprises restored prices completely. The small increases that the OPEC governments did obtain, however, were largely offset by increases in the price levels of their own imports. Their failure to negotiate successfully can be attributed in part to their lack of bargaining power—which was in turn due primarily to the surplus conditions in the market—and in part to the structure of the world oil industry dominated by a closely knit, vertically integrated oligopoly, to the competition between this oligopoly and the new independents, and to monopsonist practices throughout the world, but especially in Japan.

It was not until October 16, 1973—13 years after this initial meeting—that the host government of the oil exporting countries wrested from the transnational companies the right to set and change the prices of their oil exports in the light of their perceived collective interests. In the meantime, both market conditions and political circumstances had become more propitious. By that time, there were 13 member countires spanning four continents. The majority (seven) were Arab countries (Iraq, Kuwait, Qatar, Saudi Arabia, the United Arab Emirates, Algeria, and Libya); six were in West Asia (Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates); four in Africa, (Algeria, Libya, Nigeria, and Gabon as associate; it was to become a full member later); two in Latin America (Venezuela and Ecuador); and one in Oceania (Indonesia). Their exports accounted for over 85 percent of the world oil trade.

That the transnational companies tolerated in October, 1973, what they had refused to tolerate in September 1960—namely, the role of deciding crude oil export prices—was the result of particular market and political circumstances. The years 1972–73 had witnessed oil shortages as world demand expanded beyond planned production, re-

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Source: DAEDALUS Fall 1975.

fining, and transport capacities. The shortages in this "sellers' market" had more recently been increased by the October hostilities between Egypt, Israel, and Syria. On October 11, 1973, Israel bombarded the eastern Mediterranean oil terminals that loaded Iraqi and Syrian oil, thereby denying the world market a flow of close to 1 million barrels of short-haul crude. Several Arab oil exporting countries—this time acting outside the framework of the OPEC organization—were subsequently to constrain world oil supplies still further by gradually reducing their oil exports until the cutbacks reached, late in 1973, a peak of about 4 million barrels per day.

The OPEC nations were in no way responsible for the outbreak of war in October. The countries engaged in hostilities were Israel, Egypt, and Syria; although the latter two countries were members of the Organization for Arab Petroleum Exporting Countries (OAPEC), they were not members of OPEC. Cutbacks in oil supplies and the boycott of certain destinations were debated within OAPEC, but not within OPEC. Nor was there a consensus among OAPEC members with respect to the cutback policy. Iraq, with its radical government, was an important dissenter, and Saudi Arabia, the most important Arab producer, adopted the cutback only as a so-called defensive measure. The Saudi Minister of Petroleum and Mineral Resources explains his government's strategy thus:

> The October war broke out and it immediately became clear that it was politically necessary to use oil in defending the legitimate rights of the Palestinian nation and three Arab countries—Egypt, Syria, and Jordan—whose territories continued to be occupied by Israel in flagrant defiance of law, justice, and the United Nations. There were several alternative courses of action in which oil could have been used to serve the Arab cause: Saudi Arabia chose one course and insisted upon it in the face of the other differing views. It insisted that oil was to be used only to attract the attention of the people and governments of the West to two facts: first, the Arabs had been deprived of certain rights—a situation to which the West had shown indifference and sometimes aggravated by siding with the aggressor; second, Western economic interests in the Arab world were far more than in Israel, if indeed there were any in Israel.
>
> Saudi Arabia adamantly refused to use oil as a weapon to disrupt Western economies or as a punitive device. Therefore, the basis upon which the Arab producing countries reached agreement was that oil production should be reduced and not stopped altogether. As for the ban on exports to the United States, the late King Faisal's government actively tried to avert it. However, the American military assistance to Israel during the war, unprecedented in its volume and nature, changed the course of the war and prevented the Arabs from achieving their legitimate goal—the recovery of their occupied lands. The natural reaction to this American action was the imposition of an embargo on oil exports to the United States. Saudi Arabia also tried to ward off the ban on oil exports to Holland and urgent contacts were made, and the mediation of a Western power was sought, in an attempt to correct the hostile Dutch attitude. When these efforts failed, the Saudi ban on oil to Holland was imposed, rather belatedly.
>
> To those who watched the events during the period of the oil measures, it was clear from the successive amendments introduced to these measures that the Arab producers were not seeking to inflict damage on the Western economies. The objective was simply to remind the West of the Arab problem and of its own interests in the Arab world.[1]

However, although OPEC members were not responsible for the war, they nevertheless made capital use of its impact. When the

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[1] Ahmed Zaki Yamani, Saudi Arabian Minister of Petroleum and Mineral Resources. "Oil and International Politics," address at a meeting of the American Society of Newspaper Editors in Washington, D.C., Apr. 18, 1975, reproduced by Middle East Economic Survey [MEES] Supplement, Apr. 25, 1975, p. 3.

war broke out, the OPEC delegations had been in Vienna negotiating with the transnational companies for higher export prices, demanding increases of up to $5.60 per barrel for Arabian crude. The companies were reluctant to agree to these demands, but, when they took no action, the OPEC delegations decided that the company representatives were stalling for time, and ended the negotiations. This action gave them the opportunity they were looking for: they could now set prices unilaterally, without prior agreement with the oil companies, since their position was by now much strengthened by both the actual and the impending shortages in world oil supplies. The October increases were followed by another set of increases in December; taken together they amounted to a fourfold increase in the price of oil.

OPEC's collective efforts in 1973–74 appear on balance to have contributed to both more rapid and higher price increases than would otherwise have been the case if the transnational oil companies had still been in a position to influence pricing decisions—if only by delaying their responses to proposed price increases. Under purely competitive conditions—which can scarcely be said to exist in the real world—prices could have risen to even much higher levels during the 1973–74 reductions of oil flows had the oil exporting countries offered their oil at auction when buyers were scrambling for urgently needed supplies. On the other hand, prices could have ben lower in early 1975 had competitive auctions been used, since this was a period of slackening world demand for energy. OPEC's pricing arrangements in the period from 1973 to 1975, therefore, represented a compromise between those seeking greater price increases and those content with smaller price increases combined with long-term maximization of benefits. Since the beginning of 1975, OPEC members have attempted to stabilize the 1974 oil-export price level, largely by accepting voluntarily (and uncoordinated) cutbacks in their oil exports.

OPEC's creation and survival can best be interpreted as a response to a perceived collective threat: the transnational oil companies were threatening the prosperity of the developing oil exporting countries by unilateral cut in oil-export prices and other acts regarded as actual or potential threats to their welfare. To understand its success in achieving this goal and its role in the oil industry today calls for a review of OPEC's structure and method of operation. The following sections attempt to offer such a review and to scrutinize the sources of weakness and strength in OPEC's cooperative efforts.

OPEC'S STRUCTURE AND FUNCTION

OPEC was created in 1960 as a political entity by ministers and diplomats, primarily because at the time of its establishment, and throughout most of the 1960's, few of the countries involved had either national petroleum companies or the managerial expertise from which to draw on to staff the organization. In the 1970's, however, once full control over the oil industries had been achieved, the OPEC conference, the secretariat, and the economic commission became as concerned about the business of oil as they had already been with its politics. The business of oil called inter alia for expert skills in devising optimal pricing, production, and financial policies. For these, the OPEC governments came to rely on the technical staff of their

newly formed national petroleum companies and of their central banks. OPEC delegations began to be composed of national corporation executives and bankers rather than the politicians and bureaucreats of earlier years. This new personnel soon proved its competence in both battling and cooperating with the transnationals.[2]

The OPEC organization also became increasingly concerned about the dynamics of the world energy market.[3] Whereas previously it had negotiated only with those few transnational enterprises that stood between its members and the world market, beginning in the 1970's, it began to deal with a multitude of actors and a rapidly changing situation. This new environment elicited increasing expertise and business acumen from the OPEC nations.

In addition to the meetings of OPEC itself, the national companies of the member countries held other meetings among themselves. Although these companies were state owned, they were in closer contact with markets than were the governments. It was the companies that initiated price cuts in response to sagging demand—a move that was either disregarded or supported by individual governments without recourse to OPEC. They also individually or collectively, for example, through OAPEC in the Middle East, and ARPEL (Assistencia Reciproca Petrolera Estatal Latinoamerica) in Latin America, established their oil-related enterprises dealing with exploration, tankers, petrochemical refining, financing, and so on. The growth in these enterprises and in the expertise available to their management had a beneficial influence on shaping governmental policy in the direction of pragmatism and profitability.

Bearing in mind this shift in character over the years, the main features of the organization were—and continue to be—the following: (1) OPEC is an intergovernmental organization restricted exclusively to countries heavily dependent on oil exports for foreign exchange and economic development; (2) membership is in practice limited to developing countries; (3) decisions are reached by a ministerial conference, require a unanimous vote, and are subject to the approval of all member governments; (4) political matters are at least formally outside the scope and purview of the organization.

By the mid-seventies, the organization was comprised of four groups: a secretariat, a conference of ministers, a board of governors, and an economic commission. The secretariat acts as the administrative arm of the organization, has a permanent headquarters, and operates on a regular basis. The three other groups respectively determine policy, oversee the secretariat, and act as an economic advisory group (notably on prices). The secretariat is run by professionals with a loyalty to the common objectives of the organization; its chief officer, the secretary general, is appointed for a two-year term by the conference on a rotating basis from each of the member countries. The other three branches of the organization are composed of delegates from member governments, who represent national interests and convene periodically to make decisions and recommendations.

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[2] For personalities and statistics on the OPEC national oil companies, see the series of articles on Petromin of Saudi Arabia, the National Iranian Oil Company, the Iraq National Oil Company, and Indonesia's Pertamina in The Petroleum Economist of London, with the Pertamina article appearing in March 1975, pp. 99–101.

[3] See "OPEC National Oil Companies to Hold Regular Consultations for Coordination of Pricing and Marketing Policies," MEES, Aug. 24, 1975, pp. 1–4.

The staffing of the secretariat is restricted to OPEC nationals, and these are almost always on loan from government civil service or, more recently, from the management of the national oil companies. It is difficult to see how, in the absence of a tenure system, the OPEC staff can have a large measure of freedom of action to work for the "common interest"; it is not even clear that a tenure system could offset national loyalties. Moreover, a permanent secretariat staff can easily become bureaucratic, expansionist, and inefficient. Recognizing these problems, the ministers' conference agreed in 1974 to reform the secretariat's structure and staffing. One study commissioned by OPEC called for the creation of a "think tank" attached to the secretariat, and staffed with qualified experts recruited from both rich and poor non-member states.[4]

Descriptions of OPEC range from assertions that it is no more than a shallow organization, a feeble overlay that can only slightly improve communication among member countries, to the assertion that it is a powerful autonomous entity with a momentum of its own, whose leadership can generate common policies and strategies that otherwise could not be achieved by the countries acting individually. Those of the former persuasion regard it as little more than an information bureau or a research center, while those tending to the latter view find it acting as an effective cartel.

A number of OPEC policy-makers had in fact looked to the cartel model in shaping OPEC's functions. One of the acknowledged "fathers" of OPEC, the Venezuelan Minister of Mines and Hydrocarbons Perez Alfonzo,[5] sought in 1960 to design the organization's structure and statutes to permit the governments to operate as a cartel. The instrument for this cartel function was to be the joint prorationing of oil production in the member countries. Libya also viewed OPEC in 1972 as a countervailing force along the lines of a cartel to counter both the transnational companies themselves and other cooperating groups in the industrial countries,[6] since in that year the remarkable shift in bargaining power in favor of the OPEC countries allowed them to acquire effective control over their oil industry either through participation or through a full takeover of the transnational operations.

The Saudi Minister of Oil and Minerals was credited with introducing the participation system to the Middle East; he perceived its success in late 1972 as being "a historic event and a fundamental turning point in the international oil industry, that will make [OPEC] prominent in the world and give its member countries political strength to be taken into account in the world balance of power."[7] In 1974, however, the Saudi Minister questioned the allegation that OPEC was a "selfish cartel" on the grounds that the two countries with the largest oil reserves and oil exports (Saudi Arabia and Iran) were producing beyond their domestic needs in order to meet the requirements for energy of the world economy. In October, 1974, the Minister said:

> In Saudi Arabia we can easily cut down by about 5.5 million barrels a day, and live in comfort and meet our requirements inside and outside Saudi Arabia. In

[4] See "OPEC May Woo Outside Experts to Bolster Vienna Staff," Petroleum Intelligence Weekly [PIW], Jan. 6, 1975, p. 5.

[5] Interviewed by author in Caracas on June 6, 1970.

[6] See Libyan Arab Republic Ministry of Petroleum, Libyan Oil 1951–1971 (Tripoli, 1972), p. 163.

[7] Speech by Ahmed Zaki Yamani, President of the OPEC XXX Conference (Extraordinary) held in Riyadh on Oct. 26, 1972; text published in OPEC Bulletin, 2 (Nov. 15, 1972).

Iran, even with all the huge development programs, they can easily cut down by 2 million barrels a day, and they will meet their requirements both internally and internationally. And this is also the case with so many other [OPEC] countries. This is the difference between OPEC as a cartel and any other cartel. What we are doing right now is something foolish if I take it from the narrow angle of our selfish interest in Saudi Arabia. We are producing 5.5 million barrls a day just to help the economy of the world, to help not to have another price increase.[8]

If one applies the definition of export cartels used by Western countries (for example, the Webb-Pomerne Act of the United States),[9] the OPEC organization does not pass the test. An export cartel not only must include rigid agreements on prices, but also related agreements in such key areas as production control and market sharing. The export cartel must also be responsible for monitoring the activities of its constituent members with a view to policing violations and penalizing violators. The OPEC member governments do not perform any of these cartel functions. Their agreement on oil-export prices is strictly voluntary, and does not carry with it sanctions or rewards. Moreover, the agreements leave to the discretion of each member government the setting and changing of prices within a range considered reasonable by OPEC members. A close scrutiny of OPEC's statutes and resolutions shows that the Organization does not have supranational powers. Member countries do not delegate to any central body their policy- or decision-making powers. Indeed, they jealously guard their sovereignty, and consider their freedom of action to be paramount.

This relatively low level of authority that member countries provide the OPEC organization has so far not proven a source of weakness. On the contrary, it has enabled the organization to weather dramatic changes in world oil conditions and in its members' policies. It has enabled OPEC to survive periods of political division, of economic rivalry, and of mutations in international relations. Flexibility and responsiveness to changing circumstances have throughout characterized the OPEC organization. OPEC's development as an institution has been slow; its capacity for maintaining itself without the constant support of individual governments is limited, as in its ability to take initiatives.[10] Nevertheless, it has acted over its 15-year life in different capacities that have been largely determined by changes in oil-market conditions and in the perceptions of the leading member governments regarding the viability of collective action. In periods of a buyers' market (as in the sixties), OPEC was primarily a clearing house and a relatively weak negotiator vis-a-vis transnational companies. In periods of a sellers' market (as in the seventies), OPEC has been able to exercise greater authority.

THE EFFECTIVENESS OF THE COOPERATIVE BOND

One possible description of OPEC is that it is a structured oligopoly, that is, an organization where leadership in setting oil-export terms belongs to the few. This leadership might be exercised by a country controlling large productive resources (for example, Iran and Saudi Arabia) or by one that has the "right" perception of the

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[8] Ahmed Zaki Yamani, quoted in MEES Supplement Oct. 25, 1974, p. 9.

[9] See "Should Export Cartels Be More Closely Controlled," OECD Observer, October–November 1974, pp. 30–32.

[10] Zuhayr Mikdashi, "Cooperation Among Oil Exporting Countries with Special Reference to Arab Countries: A Political Economy Analysis," International Organization, 28:1 (Winter, 1974), p. 26.

balance of market forces at work, or the ability to act as a market barometer, or as a catalyst (for example, Algeria or Libya). In any case, the effectiveness of the cooperative bond is a function of the conditions and objectives of the member governments, of the policies and actions of the other protagonists, and of the circumstances.

Diversity—whether economic, political, or cultural—has generally been a source of rivalry and divisiveness, while conditions and objectives have been the basis for solidarity. Among the economic differences that have loomed large in intra-OPEC rivalry have been the wide variations in resource endowment, in requirements, and in expectations. A country with very large oil reserves—such as Saudi Arabia—is more concerned with the economic obsolescence of that resource, should its exploitation be constrained by price-raising policies as compared with a country of moderate oil reserves, whose concern would be to husband that resource and to produce it at a price level higher than could be considered optimal by the country with vast oil reserves.

The requirements of the member governments for oil revenues and the urgency of their acquiring these revenues vary considerably. The populous countries, with relatively low per capita incomes and vast needs for socio-economic reforms, with ambitious developmental programs, and with pressing military expenditures (e.g., Algeria, Indonesia, Iran, Iraq, and Nigeria) actively push for larger incomes. This pressure is concentrated on price increases (rather than volume increases) whenever the countries concerned perceive that they can exploit their oil reserves in a fixed period of inelastic demand. Countries whose economies have a limited absorptive capacity (e.g., the United Arab Emirates, Kuwait, Libya, and to some extent Saudi Arabia) are reluctant to increase their oil exports in order to hold depreciable currencies until they can be profitably invested. Individual plans for production control exist in a few OPEC countries, but production programs covering them all have not yet been devised because of the divergences among OPEC members and the practical problems of implementation.

The price issue has often been a source of controversy among OPEC members, especially since 1973; differences usually center on the "optimal" size and timing of price changes. Saudi Arabia is known to be relatively moderate in its demands for price increases. It in fact threatened, at an emotional and acrimonious OPEC conference in June 1974, to reduce prices on its own oil by $2 a barrel and to back up this reduction with an increase in production of 3 million barrels a day should the other OPEC members institute a price increase. That posted prices were kept unchanged at that time in the face of demands for higher prices can be attributed to the great influence of Saudi Arabia based on its vast oil reserves and production.[11]

The role of the national oil enterprises in the OPEC countries represents another source of disunity. Some of them aspire to become transnational, and are willing to play according to the rules laid down by such enterprises (this is most notable in the case of the National Iranian Oil Co.). Others want to remain agents of national governments and are primarily concerned about their domestic role in industrial development (as in the case of the Iraqui National Oil Co.).

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[11] See, for example, "Saudi Arabia Versus the Rest at Quito OPEC Conference," MEES, June 20, 1974, pp. 1–5.

Economic differences are not the only source of division and rivalry within OPEC; there are important socio-political differences among the member nations as well. The OPEC countries belong to a wide array of cultural, religious, linguistic, and racial groups. Their systems of government vary all the way from parliamentary democracies (e.g., Venezuela and Kuwait) to conservative, paternalistic, autocratic monarchies (e.g., Iran and Saudi Arabia), to revolutionary military governments (e.g., Algeria and Iraq). Differences in regional and East-West alliance structures are also pronnounced. OPEC members have at various times broken diplomatic relations with one another owing to territorial and political disputes (Iraq vs. Kuwait; Iran vs. Libya and/or Iraq). Their actions, as a consequence, have more often than not been far from unified.[12] The exception has been the regional Organization of Arab Petroleum Exporting Countries (OAPEC); representative of its unity is the oil cutback its members imposed on the Western countries both in late 1973 and in early 1974 as a defense protest over the Israeli occupation of Arab territories in 1967.

But, despite their important differences, OPEC member governments have come to realize the possibilities of cooperative action. They are aware that unless they remain together on the oil-pricing issue, they may well fail separately, and that their protagonists, the industrial powers and the major companies, will regain the power they held over the oil industry until recently.

While agreements on coordinating oil-export prices have been relatively more effective than collective production programing, at no time has there been uniformity in pricing methods and in allowances for location and quality differentials. Differences in government levies, in fiscal systems, in oil-production costs, in export prices, and in freight rates continued in 1974–75, at times exceeding $1 per barrel for a given delivery point on similar quality crudes. Moreover, OPEC governments have offered extensive credit terms for up to 5 years to some developing countries, such as India, a practice which amounts to indirect discounting of prices. In the future, such price discounts might be provoked by a drastic cut in demand and could affect some members more harshly than others. This could place additional strain on OPEC solidarity, especially if the demand cuts hit countries with the most pressing needs, and with sizable reserves capable of sustaining larger production.

The transnational companies already made one attempt, early in 1975, in this direction when they cut production in Abu Dhabi (the leading constituent member of the United Arab Emirates) from 1.65 million barrels a day in July 1974, to 550,000 barrels a day early in February 1975. The cutback was a serious one for Abu Dhabi, owing largely to its relatively heavy commitments in domestic projects for socio-economic development and foreign aid. Abu Dhabi reacted by reducing its oil-export prices in the hope of encouraging exports and raising its export revenues. Officials of the United Arab Emirates were convinced that the companies' tactics vis-a-vis Abu Dhabi represented a deliberate attempt to destroy OPEC unity.[13] The Economist ap-

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[12] See Zuhayr Mikdashi, "The Community of Oil Exporting Countries: A Study in Governmental Cooperation" (Ithaca, N.Y., 1972).

[13] See MEES, Mar. 1, 1975, p. 1; and Newsweek, Mar. 10, 1975, p. 21.

parently agreed when it remarked that such tactics could backfire by inducing OPEC countries to "take their revenge for attempts to break their unity by picking on Abu Dhabi." [14]

In order to assist Abu Dhabi, OPEC member countries had two options: one was to institute OPEC-wide production programing; the other was to tolerate a preagreed price reduction or realinement of Abu Dhabi crude to render it comparatively attractive for additional lifting by oil companies. OPEC members opted, on February 28, 1975, for the latter approach as being the more effective one, since it would not require complex administrative machinery or self-discipline by member countries for its efficient operation. The major reserve countries and large producers—notably Saudi Arabia, Iran, Kuwait, Libya, and the United Arab Emirates—agreed to absorb large reductions in 1974–75, rather than permit a disastrous collapse of the OPEC price structure. By mid-1975, Saudi Arabia was content to allow reductions of oil-export prices to take effect gradually through a decline in the purchasing power of oil paid for with depreciating currencies.

OPEC AND THE IMPORTING COUNTRIES

The oil-exporting countries, thanks to concerted action and to propitious economic and environmental factors, dramatically increased their profits from oil production and trade in 1973–74. Their success effected a world-wide redistribution of wealth in their favor, largely at the expense of the industrialized oil-importing countries, though the developing oil-importing countries were also affected. Estimates place the additional oil bill for 1974 over 1973 for the industrialized Western developed countries at about $60 billion and for developing countries at about a tenth of that figure.

While the whole world was affected by commodity booms—some favorably, others adversely—the least developed countries with limited export potential suffered most, particularly several countries of the African Sahel (Senegal, Mali, Niger, and Chad), Ethiopia, and the Indian subcontinent. Nevertheless, OPEC continued to symbolize for them the emancipation of the developing world from its dependency upon the industrial nations. To these developing countries, OPEC was often seen as a trade union facing the industrial powers as the employers, and it thus offered a model for other resource-rich developing countries to emulate. It inspired governments of copper-exporting countries, which set up the Intergovernmental Council of Copper Exporting Countries (CIPEC), of bauxite-exporting countries, which formed the International Bauxite Association (IBA), of phosphate-exporting countries, and of other primary exporting countries as well.[15]

To keep old friends and win new ones—especially after the surge in oil prices—the OPEC countries made use of their surplus income from oil to offer grants, interest-free or concessional loans, and other forms of aid both to developing countries and to a few Western nations. In addition, development aid was disbursed or committed by several national and multinational funds serving developing counties. Examples

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[14] "A squeeze on Abu Dhabi today could be a squeeze on Britain tomorrow," The Economist, Feb. 8, 1975, p. 69.

[15] The author analyzes these organizations in a forthcoming book, "Business and Government in Resources Industries: A Multinational Perspective," to be published under the auspices of Harvard University Center for International Affairs.

are the Kuwait Fund for Arab Economic Development (cap. $3.38 billion), the Saudi Development Fund (cap. $2.8 billion), the Abu Dhabi Fund for Arab Economic Development (cap. $500 million), and the Iraq Fund for External Development (cap. $170 million). Among multinational funds are the Islamic Development Bank (cap. $2.4 billion), the Arab Fund for Economic and Social Development (cap. $340 million), the Arab Bank for Industrial and Agricultural Development in Africa (cap. $275 million), the Arab Fund for African Development (cap. $200 million), and the Arab International Bank for Foreign Trade and Development (cap. $70 million).[16] In addition, the OPEC countries have offered direct assistance to individual oil-importing countries, and indirect assistance through contributions to the World Bank, to the IMF oil facility, and to the United Nations Emergency Fund. According to estimates disclosed by the Organization for Economic Cooperation and Development (OECD) and *The Economist*, the oil-exporting countries were, in 1974, the world's largest donors in terms of aid given as a proportion of gross national product, averaging proportionately five times more than the major industrialized members of OECD. *The Economist* commented that "oil exporters are mainly poor but generous." [17]

The burdens of oil-price increases were unevenly distributed among the oil-importing countries. Among the developed countries that together imported some 90 percent of OPEC's oil in 1973–74, Japan and Western Europe were more affected than the United States. Japan's oil imports represented about 80 percent of its primary energy consumption, as compared with about 60 per cent for Western Europe, and about 18 percent for the United States.

Though less dependent on imported oil than its OECD partners, American leaders insinuated, early in 1974, that as a last recourse they would resort to military action to reduce oil-import prices. President Ford, speaking in September 1974, to the World Energy Conference in Detroit, declared: "Throughout history, nations have gone to war over natural advantages such as water or food. . . ." [18] This was later repeated by Secretary of State Henry Kissinger in his Business Week interview of January 13, 1975. Echoing this American saber rattling, West German Finance Minister Hans Apel remarked that in the absence of "normal weapons" and "when nations are hopeless, when they don't see any further way out, when they have to fear the destruction of their social wealth or their democratic structures, then everything might happen," including what he termed "military reprisals" against the oil producers.[19]

While OPEC's successes were largely attributed to its price-raising activities of 1973–74, its increases were sufficiently sudden to provoke the creation of a "counter cartel" of buyers, called the International Energy Agency (IEA), late in 1974, set up under the effective leadership of the U.S. Government. The IEA was formed as an autonomous body by 15 governments of the rich Western countries and was

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[16] See "Large Increase During 1974 in Arab Development Funds," Bulletin of the American-Arab Association, published by the American-Arab Association for Commerce and Industry (New York), November 1974, pp. 1–2. See also "Venezuela Offers Cheap Oil as Aid to Central Americans—Coffee Price Stability Also Aim," International Herald Tribune, Dec. 17, 1974, p. 4.

[17] "Petro-Aid Takes Off," The Economist, Feb. 15, 1975, pp. 72–73.

[18] Business Week, Sept. 28, 1975, p. 116.

[19] "Oil War Not Barred by Bonn Aide," International Herald Tribune, Oct. 24 ,1975, p. 1.

restricted to members of the Organization for Economic Cooperation and Development (OECD), which included all the developed non-Socialist countries. IEA's members accounted in 1974 for 80 percent of the world's oil imports. The functions of IEA were to attenuate the effects of collective actions by the OPEC countries and to reduce Western dependence upon them. These functions included the building of huge oil stockpiles, sharing in total production and imports in periods of oil supply cutbacks, the conservation of energy, and the joint development of alternative energy sources.

The human, industrial, and financial resources at the command of the IEA countries dwarf those of OPEC. Where there is bargaining or confrontation between the IEA and OPEC, it is only realistic to expect the balance to be in favor of the industrialized countries. The IEA is therefore a potentially powerful cartel, not only because it includes several of the rich industrial countries, but because it represents a bold plan for supranational cooperation. Member governments have agreed to subordinate national sovereignty and oil-company independence to the supranational agency's authority in the event of oil shortages. The IEA treaty provides for an automatic demand restraint and allocation of existing oil resources, should any country or group of countries sustain a reduction in their oil supplies of 7 percent or more in relation to a designated base period. In other areas of cooperation, IEA's decisions are based on proportional representation, in which the EEC and the United States, for example, have equal votes.

OPEC'S PERFORMANCE

An assessment of the performance of an intergovernmental organization is a difficult exercise. One possible assessment might be on the basis of perceived costs and benefits. Using these as the standard of performance, the member governments would probably consider OPEC a beneficial creation. Expenditures incurred by the governments in connection with financing OPEC have averaged about $1.5 million per annum, a "drop in the bucket" in terms of the additional oil revenues that OPEC countries have received. Revenues for the five founding members (Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela) have jumped from $2.25 billion in 1960 to about $80 billion in 1974. Not that one should attribute this spectacular rise in revenues entirely to the OPEC organization: individual governmental initiatives, the growth in demand, and the shortages in world supplies also had important roles in the surge of oil revenues. Nor would OPEC have been the relatively successful organization it was had it not been for certain characteristics of the world oil industry—namely its oligopolistic structure, the vertical integration of the major companies, the foreign ownership of major oil concessions in developing countries, and the absence of acceptable commercial substitutes for oil in the short and intermediate terms. Nevertheless, the creation of OPEC has provided a starting point for its members to gain the authority to decide their oil-export prices by winning effective control over oil production. Armed with the principle of permanent sovereignty over natural resources enunciated by the United Nations General Assembly and a remarkable show of solidarity, the OPEC countries were able

to acquire majority or total control of their oil operations during the early seventies. This assumption of national control could not have been the relatively smooth operation it was had the host governments tried to operate independently.

The absence of readily available commercial substitutes to natural crudes combined with the growth in demand for oil has alerted the member governments to the scope of the opportunities available for exploiting market forces, at least in the short and intermediate terms; they have realized that in theory they can price their oil close to the value of substitutes. Greatly increasing prices is not without risk, however; there are other "costs," which in the long term might include such problems as the effective allocation of production resulting from demand shortfalls, possible injury to key trading partners, stimulating the search for alternative energy sources that would render OPEC oil superfluous, and possible political or military intervention by the United States. On balance, however, at least for the short term, OPEC leaders perceive the advantages to outweigh the disadvantages.

OPEC's achievements should not prevent us from seeing its problems and failures. It has encountered many difficulties in developing additional institutional bonds among members. Specifically, attempts to establish common institutions and projects approved in conference resolutions have often subsequently bogged down in the unwillingness of members to delegate national authority to a central body. Among these projects have been: (1) a high court of justice to arbitrate in oil and related affairs among members; (2) an OPEC-wide production prorationing system; (3) a mutual-aid fund to support member countries should their observance of OPEC resolutions lead them to suffer punitive action by major companies; (4) an OPEC developmental bank to help oil-importing developing countries; and (5) a code of uniform petroleum laws.

SUMMARY

Beginning in the 1960's, the spectacular growth of oil as a major source of energy in industrial societies after World War II, the emergence of developing countries as major oil exporters, and the rise of national consciousness in these countries had alerted them to the opportunities for collective action. To several of them, the conditions obtaining in the 1970's represented an opportunity to take advantage of these factors and to achieve higher levels of socioeconomic development. They perceived their best strategy to be in the maximizing of oil receipts over a period of time that would be sufficient to permit the speedy implementation of their development programs. To these practical considerations, one should add the psychological one of "emancipation." As eloquently phrased by a former American lawmaker, "United in OPEC, they set out to redress the imbalance between cheap oil and costly imports, and also, in the psychological sense, to redress centuries of colonialism and exploitation."[20]

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[20] Senator J. W. Fulbright, "The Clear and Present Danger," speech given on Nov. 2, 1974, at Westminister College, Fulton, Mo. on the occasion of the centennial anniversary of the birth of Winston Churchill; printed in MEES, Nov. 15, 1974 (emphasis added).

The leaders of the rich industrial countries were—and remain—generally reluctant to adjust economically and psychologically to this changed balance in the division of wealth accruing from the oil trade. Some even toyed with the idea of military occupation of oil fields in order to restore the status quo. On the basis of the dramatic changes of 1973–74, one should view with some skepticism the prospect that the richer nations will willingly share their wealth and power with the less fortunate members of the international community.

OPEC might well be seen in retrospect to have been a key contributor to the changing of the character of the international system, and as a catalyst in the formation of new political relations both among nations and between nations and major transnational enterprises. It has already had its influence both as a protagonist in the international system and as a model to be emulated by other resource-rich underdeveloped countries. The remarkable fact about OPEC is that it proved to be a reasonably effective force for arriving at consensus, narrowing the differences in policies among member governments, and contributing to collective action.

The emergence of the importance of the OPEC national oil companies appears to be a development for the future. While the OPEC organization was dominated until the early seventies by civil servants, whose concern was to negotiate for larger governmental income from foreign concessionaire companies, by the midseventies, these companies had moved in to take a greater share in OPEC's decisionmaking processes with the objectives of seeking profitability and growth, acquiring modern technology and managerial capacity, increasing international markets, and stabilizing business relations with the outside, including the major foreign oil enterprises. By mid-1975, some OPEC national oil companies had already entered into joint ventures with the major oil companies; for example, the National Iranian Oil Co. was exploring for oil in the British sector of the North Sea in cooperation with British Petroleum and was linking up with American and European enterprises in their domestic markets. Clearly, their attitude is no longer one of helpless domination by the economic enterprises of the Western world.

The Development of Crisis

(By Edith Penrose)

The chronology of events in the international oil industry from January 1970, to the present shows clearly the progressive interaction of three separate historical developments. Each of these developments had its origin in circumstances unreleated to the others and long preceding the period under discussion. Each developed independently, but each was approaching its own crisis, or turning point, at the beginning of the decade. As it moved toward its own crisis, each interacted with and reinforced the others and produced a concatenated series of events that culminated in what we loosely call the oil crisis.

The three historical developments were, first, the rising bargaining power of the governments of the oil-exporting countries of the Middle East vis-a-vis the international companies that had discovered, developed, and long controlled Middle Eastern oil; second, the growing dependence of the United States on Middle Eastern, and specifically Arab oil; and third, the establishment and expansion of Israel in Palestine against the bitter opposition of the Arab countries, but with the strong support of the United States. A fourth development, which intensified the effects of the others, was the increasing confusion in international monetary relationships combined with the rising rates of inflation in the world's industrial economies.

Many of the other papers in this volume deal with one or another aspect of these developments. In this paper, I want to analyze their interaction as the circumstances leading to the crisis emerged, slowly at first and then accelerating in the winter of 1973.

Although the establishment of the Organization of Petroleum Exporting Countries in 1960 marked the beginning of increasingly effective cooperation among the crude-oil exporting countries, it was the reopening of price negotiations with the new Libyan government in 1970 that set in motion a chain of events, the direct repercussions of which were rapidly to overturn most of the established arrangements between companies and governments in the Middle East. The Teheran and the Tripoli price negotiations in 1971 stemmed directly from the Libyan agreements in 1970. The success of the former from the point of view of the exporting countries, together with growing political pressures, paved the way for participation by governments in the equity of the companies and to eventual government control.

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SUPPLY, DEMAND, AND PRICES

A more serious threat to existing agreements arose from the impact of increasing market prices, largely as a result of the scramble for supplies by American companies. Early in 1972, the Bureau of Mines

Source: DAEDALUS Fall 1975.

reported that U.S. crude oil output was expected to fall for the third year running by over 2 percent, and that imports would rise rapidly to meet the consequent abnormally high demand. Some predicted that imports would reach 35 percent of the total U.S. supply, but that even this amount would be insufficient to prevent shortages of gasoline in the summer and of home-heating fuels in the winter. At the same time, however, the Middle Eastern output rose rapidly to a level nearly 38 percent higher in the first 6 months of 1973 than it had been in the same period in 1972.

Between the spring of 1970 and the summer of 1973, market prices for crude oil more than doubled measured in dollars, and nearly doubled in terms of other currencies, but the fiscal income of the host governments accounted for less than half of the increase. The rest can be attributed to a tighter fit between import demand and export capacity,[22] in other words, to market forces. There is a clear record in the trade press of the short-term pressures of demand on market supply and of the increasing prices offered by buyers—mostly American, but also Japanese and European, independents.

In addition, the large, integrated major companies became increasingly concerned about the extent to which the participation of host governments in their major concessions would affect their own supplies. In particular, they were uncertain about the terms on which they would in fact have access to government-owned crude oil; uncertainty about prices naturally induces some caution with respect to future sales commitments.[23] As a consequence, the integrated companies began reducing their outside sales of crude oil, forcing new buyers and new demands into competition in an even tighter market. The situation was summarized by Dillard Spriggs, a New York investment consultant:

> 1973 was the time when the push by independents for participation crude was on, when everyone was seeking assured sources of supply, when the U.S. Government freed American refiners to go abroad for foreign crude, and when Libya was threatening to nationalize the American companies.[24]

President Nixon's energy policy, announced in a message to Congress in April 1973, reinforced the continuing rise in international oil prices which had become one of the central considerations in the pre-

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[22] J. E. Hartshorn, "Oil Diplomacy: The New Approach," *The World Today*, 29:7 (July, 1973), pp. 282–83.

[23] See, for example, the reports in *PIW* for January 8 and February 19, 1973. By July, *PIW* reported that the majors were no longer suppliers of participation crude and that new independent refiners had to rely on the market (July 16, 1973).

[24] Testimony of Dillard Spriggs, Executive Vice-President of Baker Weeks & Co., Inc., in U.S. Senate, *Hearings before the Subcommittee on Multinational Corporations* [Church Committee] *of the Committee on Foreign Relations on Multinational Petroleum Companies and Foreign Policy*, 93rd Congress, second session, January 30, 1974, Part 4, p. 61. In his testimony, Mr. Spriggs stated that the companies' response to the new situation was "to cease making long-term supply or sales commitments to third-party purchasers. They could not know whether they would be able to honor any commitments they might make. The name of the game in international oil became 'hold on to supply' . . ." (*ibid.*, p. 57). "This situation has had a significant impact on what the independents have done. Purchasers of crude oil . . . bought increasing amounts of spot oil because they couldn't get long-term supply contracts from the majors. That forced the price up in the market, and the independents began to line up to buy participation crude from the government-owned companies. . . . On top of this situation the United States removed all quantitative controls of crude-oil imports May 1, 1973. Because of declining production of domestic crude oil and its availability, most U.S. refiners were at that time having trouble meeting operating schedules and, as they looked to the future, they faced a widening gap between their needs and what they could obtain domestically. Most of these companies joined the Europeans and Japanese, all seeking to buy participation crude from the producing countries. Even certain American utility companies sent missions to the Middle East looking for supplies" (p. 60).

vailing atmosphere of crisis, because it freed American importers from the mandatory quota system without imposing any restrictions on the freedom of either established or new refiners and marketers to bid against each other in a tight international market. The supply situation encouraged marketers to enter into refining, but, in order to get oil, they had to bid for the participation crude available from the governments of the exporting countries. In other words, although U.S. import demand was instrumental in creating a continuing crisis, the United States did nothing either to control it or to manage the way it hit the market.[25] Instead, the Government concentrated its diplomacy on attempting to organize a cooperative program with other consuming countries, thus, in effect, shifting the problem to the political arena. In that arena, however, the problem could not be dissociated from the broader question of American foreign policy in the Middle East.

The rapid inflation of prices and radical changes in market conditions created a situation between the companies and their host governments that became increasingly unfavorable to the latter, a result which had not been anticipated by the companies any more than it had been by the governments. This inadvertent effect was due to the way in which profits and taxes in the oil-exporting countries were calculated. During the 1960's, the market prices of crude oil and oil products had been falling, but OPEC had prevented further cuts in posted prices; in that period, therefore, the Government share in realized prices rose. This mechanism for increasing the Government share was basic to the Teheran and Tripoli agreements; the *rate* of the "profit" tax rose to 55 percent, and the price used to calculate the profits to which the new rate was applied was the higher posted price rather than the lower market one. Clearly, however, if market prices came to exceed posted prices the Government share in "realized profits" would fall. Thus, the Teheran agreement protected the governments against *falling* market prices, but not against *rising* market prices, the expectation shared by both companies and governments being that posted prices would remain above market prices. It could only have been on this basis that the governments (or even, presumably, the companies) expected the agreement, in its own words, to constitute a "fair appropriate and final settlement."[26]

Changed market conditions similarly affected the terms in the participation agreements that applied to oil sold back to the companies by the Government. It was assumed that the governments would not quickly find markets for their share of the oil at prices higher than the agreed buy-back prices, and certainly not at or above posted prices. Market developments in the early 1970's were seriously undermining both expectations. As early as May 1972, Saudi Arabia sold all of its participation crude available for 1973 and part of that available for 1974 and 1975, admittedly very small amounts, at record prices.[27] In June, Quatar was reported to have initialed an agreement with an American independent company for all of its participation crude for

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[25] In contrast, Japan did make such an effort. In February, 1973, the Japan Lines made a contract for large supplies of crude from Abu Dhabi at very high prices (reportedly taking most of the participation crude Abu Dhabi had available). MITI immediately took steps to control the bidding of Japanese companies, thus incurring much criticism from Abu Dhabi; see *MEES*, 16:16, 21, 22 (February 9, March 16, and March 23, 1973).

[26] The companies were, in principle, protected against falling prices by the effect on their costs of taxation based on posted prices, since such a tax, acting as a tax per barrel of exports, set a floor to prices.

[27] *MEES*, 16:29 and 31 (May 11 and 25, 1973).

the period 1973–75 at a price in excess of the posted price.[28] By August, market prices in the Mediterranean generally had gone to well above posted prices,[29] and PIW reported that the demand from American refineries for low-sulfur fuel was pushing prices in Latin America and in Nigeria to $5 a barrel and over.[30] In September, Algeria, which was not a party to any of the agreements, raised its prices to $5 a barrel and imposed an exploration tax on the companies of 35 cents a barrel.

Not only were the price expectations of the preceding year thus being everywhere exceeded, and market prices beginning to rise above posted prices, but the governments were having no difficulty in selling their share of the oil. If such conditions continued, there would be no necessity for a phase-in period, during which the governments could seek market connections, and no need, therefore, for a gradual increase in the governments' equity entitlement to a greater share of the oil.

It is no wonder, then, that the more radical members of OPEC began to press harder. At the XXIV Conference in Vienna on June 17 and 18, 1973, Iraq led a move to scrap the Teheran and Tripoli agreements and to adopt instead the Venezuelan policy under which governments would unilaterally set their own prices. The attempt failed, but all members felt that at least the annual escalation of prices by 2.5 percent, which had been provided for in the agreements, should be reconsidered in the light of the 6- to 7-percent rise in the prices of goods imported by the oil-exporting countries. At the same time, the members were reluctant to advocate a unilateral abrogation of their agreements.[31]

As crude-oil costs rose, the oil companies raised prices in product markets to an extent greater than would have been justified by the rise in crude costs alone. The exporting countries interpreted this as a strategy for enlarging company profits over and above the increases already resulting from the higher prices of crude oil. Since the governments' own opportunities for profit were restricted by their price agreements,[32] this was an additional reason to subject these agreements to a reexamination.[33] The preferential access of the major companies to crude oil gave them an increasing competitive advantage as market prices rose in relation to costs, including taxes paid to the exporting governments. PIW calculated in August that, if a major company met all of its refinery needs from its own sources, the cost advantage on Arabian light crude from Saudi Arabia delivered to Rotterdam was some 93 cents a barrel over independent companies, with a transport cost advantage ranging from 30 to 62 cents a barrel.[34]

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[28] *MEES*, 16:36 (June 29, 1973).
[29] *MEES*, 16:41 (August 3, 1973).
[30] *PIW*, 12:34 (August 20, 1973).
[31] See, for example, reports in *MEES*, 16:49 (September 28, 1973).
[32] Dillard Spriggs calculated that the profit margins on crude oil for the companies had, by the spring of 1973, gone up to around 90 cents a barrel from the slightly over 30 cents a barrel of 1971. He also testified that the companies were increasing product prices disproportionately in order to shift profits from crude-oil production to their refining and distributing operations, in view of the possibility that their owned crude-oil production might eventually be lost. *Hearings, op. cit.*, p. 61.
[33] It will be recalled that the Shah of Iran had originally insisted during the Teheran negotiations in 1971 that, in return for a five-year agreement on prices, the companies should agree not to raise petroleum-product prices. This issue had been dropped, but not surprisingly it was raised again when product prices were seen to rise at a greater rate than crude prices.
[34] *PIW*, 12:34 (August 20, 1973). There was also some evidence that, when prices sagged, at least some companies took action to prevent the resale of oil at lower prices by purchasers. In July, an easing of prices in the United States was reported by *PIW*, and some sellers emerged who were offering to resell Saudi Arabian participation crude at lower prices than they had paid. "One refiner . . . sought to sell a few summer cargoes of the crude he received on a long-term contract from a major international oil firm. The supplier learned of it and squelched the offering. The refiner was told his contracted volumes would be cut if he was unable to take the oil for himself." *PIW*, 12:29 (July 16, 1973).

By September, 1973, all the OPEC countries were prepared formally to request a revision of the price agreements, for they could no longer accept the steady decline in their share of the profits from oil. It was calculated that the national profit split on realized prices between governments and companies may have changed from 80 to 20 in the governments' favor at the time of the Teheran agreement to around 64 to 36 in the governments' favor now.[35] Negotiations with the companies to revise the Teheran agreement opened on October 8, in Vienna. On October 12, in spite of the outbreak of war on the sixth, the companies asked for a 2-week adjournment, since they felt that the increases in price being asked—reportedly around two to three dollars a barrel—were larger than they could agree to without further consultations.

Four days later, on October 16—the day before output restrictions were decided upon by the Arab countries in connection with the war—the ministerial committee representing the six gulf states of OPEC, including Iran, met to consider the status of the negotiations. The ministers decided to negotiate no further: the governments would post their own prices, thus completing once and for all the transfer of control over tax prices. New posted prices were announced, representing a 70-percent increase for Gulf crudes—from $3.01 to $5.12 a barrel for Arabian light—and raising the government's take from $1.77 to $3.05 a barrel.

The general policy adopted was to maintain posted prices at 40 percent above the applicable market prices—that is, the prices at which governments sold crude to third parties. On this basis the new posted prices were represented as an increase of 17 percent over prices realized in recent sales. In the future, the posted price would change as the market price changed. The intention was to reestablish the same relationship between posted and realized prices as existed in 1971 before the Teheran agreement and, by extension, a roughly similar profit-sharing ratio as well.[36] Libya raised its tax-reference price by 94 percent.

Even at this point, the Arab-Israeli conflict, which by now had erupted into full-scale war, had not influenced the posted price of oil. Although the Arab countries had long warned that U.S. policy in the Middle East could have serious effects on supplies of oil, and these warnings had been intensified during the spring and summer of 1973, as other papers in this volume show, Middle Eastern output continued to increase rapidly. The October 1973, increases in posted prices were not related to the war, but to the fact that the assumptions underlying the Teheran agreement had proved unjustified. The exporting countries therefore felt that the tax prices agreed upon in Teheran required

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[35] *MEES*, 16:48 (September 21, 1973). *PIW* calculated that the real cost of importing oil for several major European countries and Japan in August, 1973, was still below 1957 levels. For countries with depreciating currencies, this was not true (see *PIW*, 12:39 [September 24, 1973]).

[36] *MEES*, 16:52 (October 19, 1973). The same issue reprints the text of the OPEC communiqués on the subject.

adjustment to the new market and monetary conditions. These conditions were not, in their view, of their own making, since they had not cut back supplies, although they had increasingly emphasized the possible effects on supply of U.S. policy toward Israel.

PRICES AND OUTPUT RESTRICTIONS

The output and destination restrictions imposed by the Arabs, on October 27, 1973, to support their war effort further narrowed the market for oil, and, in particular, for oil free of destination restrictions. Hence, the prices bid in the free market by independent companies scrambling to obtain supplies rose even further, and decisions had to be made regarding posted prices. On November 17, the oil companies, at their own request, met with the six gulf states concerned with the Teheran agreement to discuss future arrangements for setting posted prices. The discussions made little headway, for the companies were strongly opposed to the pricing decisions taken by the ministers on October 16. But they presented no alternative proposals acceptable to the ministers, who argued that future price should be market oriented. Given the supply situation as it had developed in 1972–73, together with the restrictions imposed to support Arab political objectives, this position was clearly unacceptable to the companies. There was, however, considerable difference of opinion among the exporting countries. Some wanted to play the market for all it was worth right now, and some preferred a slower and more moderate approach.[37] This difference was to come to the surface in December.

The National Iranian Oil Co., NIOC, had called for bids by December 10 for the 470,000 barrels a day of crude oil that it intended to market in the first 6 months of 1974. This was the first major government sale of crude oil since the oil restrictions had been put into effect. NIOC departed from its previous policy of simply announcing the price at which it would sell; for the first time, it went out deliberately to test the market. Bids, mostly again from U.S. independents—many to their subsequent regret—but including at least one from a European company, reached from $16 to over $17 a barrel.

These prices, together with reports of bids for Nigerian and Libyan crude of over $20 a barrel, led the OPEC ministers—particularly the Iranian minister—to demand, at their meeting in Teheran on December 22–23, that the posted price to become effecttive on January 1, 1974, be in the region of the bids Iran had received. It will be recalled that OPEC had earlier decided that market prices, as determined by direct sales, should be the chief guide for the setting of posted prices. Saudi Arabia resisted the increase on the ground that the high bids reflected the embargo and destination restrictions on Arab oil and, thus, did not reasonably represent appropriate market prices. On the other hand, the Iranians had long maintained that the price of oil should equal the cost of the nearest substitutes: it could be argued that buyers would be willing to pay any price that left the cost of oil below the cost of substitutes. A compromise was reached on a posted price of $11.65 a barrel for the marker crude—Arabian light 34° API—yielding a government take of $7 a barrel.

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[37] See *MEES*, 17.5 (November 23, 1973), which contains extensive documentation on the issues.

Thus, the posted price prevailing before the outbreak of war was nearly quadrupled. The OPEC communique announcing this shock to the world, with its enormous implications for both monetary inflation and increased industrial costs, ended with a sentence of alarming simplicity: Considering that the government take of $7 a barrel is moderate, the Ministers hope that consuming countries will refrain from further increases of their export prices.

The oil minister of Saudi Arabia subsequently announced that in the opinion of his government a lower price would have been more equitable and reasonable, but the Shah of Iran, in a press conference in Teheran, insisted that a $7-a-barrel government take represented the minimum cost of developing alternative energy, notably the extraction of oil from shale or the liquefaction or gasification of coal. He argued that such costs were the only proper basis for pricing oil. Export prices all over the world, from Indonesia to Bolivia, were immediately raised in line with OPEC's decision.

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The Oil Companies in Perspective

(By Mira Wilkins)

Of all the facets of the oil crisis, the least understood, perhaps, is the role that was played by the large multinational enterprises. Each of these giant companies used its own strategies, which reflected its individual corporate dynamics and occasionally came into conflict with the interests of the others. Since it was generally assumed that the firms would automatically act on behalf of their home countries, that they were in fact "flag" companies, there was widespread dismay when they obeyed the embargo rules laid down by the Arab States. To act thus as instruments of foreign states seemed unpatriotic, if not positively immoral. Another surprise was the rise in oil prices. According to the popular theories, either the American Government allowed prices to rise because it was pressured by the corporations—whose interests were in any case identical to those of the government—or, alternatively, the corporations acquiesced in the oil exporting countries' wish to raise prices—which they in any case favored. To test the validity of these alternative explanations for corporate strategies and to understand the relations of the major corporations with their own countries, the historical background of the interactions between the multinationals and their home and host governments must be investigated.

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World War II and the immediate post-war period did not result in increased competition in the oil industry, but did produce some other changes. Both during and after the war, just as after World War I, a concern over the inadequacy of available oil supplies emerged, especially in the early fifties, when the United States shifted from net exporter to net importer of petroleum and petroleum products. The immediate post-war years saw new corporate attention paid to investing in the vast Middle Eastern oilfields. In 1947, Standard Oil of New Jersey and Socony-Vacuum made arrangements to join with Socal and Texaco in the latters' important concession in Saudi Arabia. The concession was held by Arabian American Oil Company—Aramco—which was now to be 30 percent owned by Socal, Texaco, and Jersey Standard, while Socony-Vacuum—now Mobil—held the remaining 10 percent. Mobil, with a smaller international marketing organization and fearing the investment risks, opted to take the 10 percent interest rather than a larger share.[8]

In the immediate post-war years, a few independents entered the world oil industry—for example, Aminoil and Getty Oil in 1948–49 in

[8] Testimony of William P. Tavoulareas, U.S. Senate, Committee on Foreign Relations, Subcommittee on Multinational Corporations [the Church committee], June 6, 1974 (still unpublished).

Source: DAEDALUS Fall 1975.

the Kuwait-Saudi Arabia Neutral Zone. But because it takes time to find oil, by 1952 the seven major companies were still producing 90 percent of the crude oil and marketing 75 percent of the oil products outside North America and the Communist countries. As in earlier years, however, the corporate giants failed to maintain their preeminence. British Petroleum's monopoly position in Iran was shattered in 1954 when a large number of companies—both majors and independents—joined in the Iranian consortium. Neil Jacoby has tabulated a list of 350 firms that invested in the foreign oil business—outside North America and the Communist countries—between 1953 and 1972. Although some of the companies on his list were not strictly speaking new in 1953, having had earlier operations abroad, many enterprises either entered anew or enlarged already existing but relatively small foreign stakes. The companies included large and medium-sized American firms that earlier had had few or no foreign investments, European and Japanese private firms that were developing multinational businesses, and a number of government firms—both consumer and host government enterprises.

As a result of these many new entries into the field, the control of the major seven diminished. By 1968, the majors were producing a little more than 75 percent of the crude oil outside North America and the Communist countries, compared with their 90 percent in 1952. This was still a high percentage, but it was a declining one. Likewise, the international giants marketed slightly more than 50 percent of the oil products sold outside North America and the Communist countries, compared with 75 percent in 1952. In every part of the oil industry—concession areas, proven reserves, production, refining capacity, tanker capacity, and product marketing—the percentage held by the top seven companies declined in the fifties and sixties.[9]

Oil resources were developed in the sixties primarily by the majors in the Persian Gulf States and Nigeria and by the majors, independents, and consumer government enterprises in Libya and Algeria. Despite the oil companies' constant complaints about "overproduction" and excess capacity, the companies made substantial new investments in producing properties. These included investments by the majors to match the new stakes of independents, as well as investments by all the enterprises to obtain more diverse and thus more secure sources of supply and to take advantage of lower cost and more accessible oil discoveries. The companies made even larger corporate investments in consuming countries, in both refining and marketing, to obtain further outlets for the abundant petroleum.

The development of more integrated corporate operations failed to hold up the price of oil. The growth of the new oil supplies resulted in a drop in market price. Because of its cheapness, new dependence on oil developed in Western Europe and Japan and because of its desirability compared to coal, reliance on it also rose in the United States.[10] The major multinationals could not control the price decline in Europe and Japan, nor were they very happy about it.

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[9] *Petroleum Press Service*, 36 (December, 1969), 458; Neil H. Jacoby, *Multinational Oil* (New York, 1974); Raymond Vernon, "Competition Policy Toward Multinational Corporations," *American Economic Review*, 64 (March, 1974), 279.

[10] The U.S. market was protected, and avoided the market price decline that occurred in Europe and Japan.

In 1970–73, however, the trend was reversed. The market price of oil rose again, as gaps in supply, often caused by political events, occurred with increasing frequency. Corporate strategies in the seventies continued to center on balancing supply and demand and maintaining corporate profits. As in times past, the investment decisions and marketing plans in the oil industry were made by the corporate managers of each individual enterprise, although now they found themselves more often on the defensive. While the multinationals persisted as the principal actors in the international oil industry, their powers were becoming ever more constrained.

II

That each major multinational corporation had its own history, its own management, and its own international logistical system did not means that the home governments of the companies had no influence on their strategies and perceptions. Yet home governments and companies did not necessarily agree. Of today's seven giant multinationals—Exxon, Mobil, Texaco, Gulf, Shell, Socal, and British Petroleum—all began as private enterprisees. Only one, the predecessor of British Petroleum in 1914, had attracted a government equity interest. And, while BP has since then been controlled by the British Government, all indications suggest that, at least since 1921, it has in fact functioned much as the other multinational corporations, and not as an instrument of its home state.[11] The home-government equity holding in British Petroleum has on occasion acted to the firm's detriment, however; host governments are wary of dealing with a foreign "state" enterprise.[12]

In their international business; the American companies have been limited by government antitrust and trading-with-the-enemy legislation, but they have also been aided by government rules on double taxation and, at times, by Washington's general commitment to support legitimate private enterprise abroad. Over the years, American multinational managers have asserted that the British Government has been more supportive of its corporations than their own,[13] but in fact the amount of assistance given by the British to BP and Shell has varied both in time and also according to the interpretation of particular analysts.[14] As for the Dutch Government, it seems to have been less knowledgeable, less powerful, and less prepared to act on oil matters than the British state.[15] Indeed, except in war, rarely did any of these home governments exert its prerogative to force the multinationals to

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[11] On the 1914 acquisition by the British government, see E. H. Davenport and Sidney Russell Cooke, *The Oil Trusts and Anglo-American Relations* (London, 1923), pp. 11–23, and J. C. Hurewitz, *Diplomacy in the Near East and Middle East*, I (Princeton, 1956), 278–281. With the stock purchase, the government obtained the power to appoint two directors to the board; they were not to interfere in "ordinary commercial management," but could veto the proposals of others. The British government's investment of £2,000,000 enabled the company to add to its refinery at Abadan in Iran and expand production.

[12] Certain nations even passed laws barring companies controlled by foreign governments: Mira Wilkins, "Multinational Oil Companies in South America in the 1920s," *Business History Review*, 48 (Autumn, 1974), 439. See also Michael Posner, *Fuel Policy* (London, 1973), pp. 50–51.

[13] Interviews and corporate correspondence. For a recent statement, see John J. McCloy testimony before U.S. Senate, *Hearing Before the Committee on Foreign Relations, Subcommittee on Multinational Corporations, Multinational Corporations and United States Foreign Policy*, 93rd Congress, second session, 1974, part 5, pp. 274, 281 (henceforth cited as *Church Committee Hearings*).

[14] Compare, for example, Elizabeth Monroe, *Britain's Moment in the Middle East, 1914–1956* (London, 1963), pp. 105–106 with P. H. Frankel, *Mattei* (New York, 1966); pp. 34–35.

[15] This is the impression given by corporate executives.

perform in a particular way, although each company often informally reviewed its problems with home-government representatives.

The French and Italians established publicly owned oil companies in the twenties. Apparently these governments have maintained greater control over their oil corporations than have the American, British, and Dutch, although these corporations have also developed strategies and styles over the years which have enabled them to remain aloof from direct state intervention.[16]

In any case, the seven major multinationals are not and, with the exception of British Petroleum, have never been "flag" companies; they have, however, never been averse to their governments' appreciating their efforts. They believed that "nationals operating in oil abroad need to have the political risks reduced by intelligent and sympathetic diplomatic support by the government," although, on the other hand, "this does not mean government participation, which should be rigorously avoided in any phase of their operations." These two quotations, from the 1944 recommendation of the U.S. National Oil Policy Committee, reflected the major oil corporations' views both before and after the war. The companies thought of themselves—and in fact were—the principal actors in the international oil industry.[17]

The following examples may perhaps illustrate the complex government-company relationships in the postwar years. While many foreign-policy issues affected oil industry operations, there is rarely any evidence that the oil companies contributed to these decisions. The Truman doctrine, for instance, committed the United States to defend Greece and Turkey against communism, and in the process created security for corporate Middle Eastern oil investments, yet, Texaco's chairman of the board testified that the promulgation of the doctrine caught him by surprise.[18] Neither his company nor, it seems, other oil companies had played any direct role in its formulation. On the other hand, when the U.S. Government supported the formation of the State of Israel in 1948, this made operating conditions awkward for oil investors in Arab lands. Over the years, representatives of American companies and State Department officials certainly discussed the implications of American foreign policy, but there is no evidence that the corporations influenced American policy toward Israel; in fact, there is evidence that no such influence existed. Instead, the multinationals responded by adapting to it. In 1948, for example, the Iraq Petroleum Co. rerouted an existing pipeline from the Kirkuk fields in Iraq so it would bypass Israel, and the partners in Aramco revised the route for a new pipeline under construction from Saudi Arabia to the eastern Mediterranean to achieve the same objective.[19]

During the Korean war, the home governments recognized that adequate oil had to be sent to the Far East in the face of shortages

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[16] Jean Rondot, *La Compagnie Française des Pétroles* (Paris, 1962) and Frankel, *Mattei*.

[17] Quotation is from February 28, 1944, recommendations of the National Oil Policy Committee, which included representatives of Jersey Standard, Gulf, Socony-Vacuum, and a number of independents; printed in *A Documentary History of the Petroleum Reserve Corporation*, prepared for use of the U.S. Senate Committee on Foreign Relations, Subcommittee on Multinational Corporations, 93rd Congress, second session, 1974, p. 79.

[18] Testimony of W. W. Rodgers, U.S. Senate, *Special Committee to Investigate the National Defense Program, Petroleum Arrangements with Saudi Arabia*, 80th Congress, first session, 1947–48, part 41, p. 24923.

[19] Wilkins, *Maturing*, p. 320.

from the aftermath of the 1951 Iranian oil expropriation. When, in 1951, the U.S. Government agreed not to invoke antitrust legislation, together the companies arranged the logistics of supply.[20]

The companies had eventually defeated the expropriation itself with an effective boycott of Iranian crude oil. Washington helped by requesting that American independents not buy Iranian oil.[21] It did so because the State Department was concerned that Russia might move into Iran, and it took the initiative to settle the dispute before this could happen. A Jersey Standard director, Howard Page, told the present author that his company participated in the resulting Iranian consortium on the urging of the U.S. Government; his company also recognized the dangers that the Soviet Union might move in and dump Iranian oil on world markets. Mobil, which was crude short, may have had different interests in obtaining a stake in Iran, although there is evidence that it, too, had worries about the risks in investing. All of the majors wanted to obtain an orderly reentry of Iranian crude oil into the world market.[22]

After an August 1953, National Security Council decision that enforcement of U.S. antitrust laws was secondary to America's national security interests, the American majors met with the European-headquartered giants to formulate a common strategy in the Iranian negotiations. The group prepared the detailed plans on the proposed consortium. The U.S. Departments of State and Justice wanted American independent firms to become involved, and on March 30, 1954, the U.S. Ambassador to London, Winthrop W. Aldrich, cabled Secretary of State John Foster Dulles that, during discussions in London among the companies, an agreement had been reached to invite the independents to join. Aldrich added "we [are] very much relieved this matter apparently settled in principle at company level without necessity [to] apply Government pressure." Apparently, the Italian Government wanted its state enterprise (ENI) to participate also, but the British Government and the major companies did not. ENI was excluded. By contrast, the French Government company, Compagnie Française des Pétroles, which had from the beginning been involved in the Iraq Petroleum Co., was included in the Iranian consortium.[23]

In July 1956, the Egyptians nationalized the Suez Canal Co. British Prime Minister Anthony Eden feared that Egypt would place Middle Eastern oil under the control of a united Arabia led by Egypt under Russian influence. In October, when the second Arab-Israeli war began, British and French forces intervened to keep the canal open and to support Israel. The United States opposed the British and French action. The canal was closed. In the transport crisis that followed, the United States joined with European governments to plan for international oil allocations with the multinational oil corporations participating in the planning. The canal was reopened on April 1, 1957, and the crisis passed. Governmental involvement notwithstand-

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[20] *Ibid.*, 290 : *Cartel Docs.*, pp. 14–15.

[21] Wilkins, *Maturing*, pp. 321–22 ; letter, American Independent Oil Company to John Foster Dulles. October 15, 1954. *Church Committee Hearings*, part 7, p. 250.

[22] Wilkins, *Maturing*, p. 322 ; *Cartel Docs.*, pp. 58, 27, 49.

[23] *Cartel Docs.*, pp. vii, 51 (action memo, August 6, 1953) ; *Ibid.*, pp. 56–58, 82–83 ; M. Tiger and L. G. Franko, "E.N.I." (mimeographed). Centre d'Etudes Industrielles (Geneva, 1973).

ing, it was the oil companies that coped with the allocation problems in 1956–57.[24]

The international oil world in 1959–60 seemed fraught with more than the usual amount of political uncertainty. Castro had expropriated the major oil refineries in Cuba. The multinational oil companies worried over their huge assets in nearby Venezuela, and in 1960 they withdrew funds from that country.[25] Records are not available, but there is evidence that oil company officials conferred with Washington to discuss the general state of affairs. The insecure situation in Venezuela made the Middle East and North Africa far more significant as oil sources. The Russians were exporting substantial amounts of oil to Western Europe and to the less-developed countries, leading to fears that the Soviet Union would start using oil as a political weapon.[26] Moreover, to add to the uncertainty, in September 1960, the major oil exporters joined in forming the Organization of Petroleum Exporting Countries (OPEC), which subsequently added other oil-exporting nations to its roster. No one knew how much power OPEC might eventually wield.

John J. McCloy, a lawyer for the seven major multinational companies, discussed the Middle East with President Kennedy with regard to protecting the free world from becoming too dependent on Russian oil. McCloy indicated that the companies might need to act in unity to offset the pressures of the OPEC nations. At this time, little Middle Eastern oil was entering the United States, which had imposed oil-import quotas in 1959. But America's European allies were still dependent on Middle Eastern oil, and American-headquartered enterprises had large investments in it. McCloy discussed with Attorney General Robert Kennedy the possibilities of collective action by the companies, if needed, and later, on an informal basis, with each subsequent Attorney General, keeping the Justice Department informed in case formal clearances were required. The issue of antitrust continued to shadow the American multinationals' relations with their government. In 1953, the Justice Department had inaugurated a suit against the companies, and had obtained limited consent decrees from Jersey Standard and Gulf in 1960 and from Texaco in 1963.[27]

In the 1960's, there were numerous oil crisis that many oil company officials apparently had forgotten by 1974. The home governments of the companies were consulted, for example, on the events in 1961, when Iraq ordered the Iraq Petroleum Co., to relinquish 99 percent of its concession, in the mid-1960's, when the Indian government demanded American oil companies to refine Russian oil, and, in 1967, when the Six-Day war broke out and the Suez Canal was again closed. During the Six-Day war, with the Justice Department's permission, the companies coped effectively with reallocation of supplies, and no nation was short of oil. The State Department knew of these oil matters through the American-based companies, although it was some-

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[24] Eden quoted in Elizabeth Monroe, *Britain's Moment in the Middle East 1914–56* (London, 1963), p. 113; Shoshana Klebanoff, *Middle East Oil and U.S. Foreign Policy* (New York, 1974); data from Angus Beckett.

[25] Figures in *Survey of Current Business* indicate large U.S. capital withdrawals from Venezuela.

[26] U.S. Legislative Reference Service, *Problems Raised by the Soviet Oil Offensive*, 87th Congress, second session, 1962.

[27] Testimony of John J. McCloy, *Church Committee Hearings*, part 5, pp. 258; 256–57; list of clients in 1961 in *ibid.*, part 6, pp. 290; Wilkins, *Maturing*, pp. 299, 388.

times informed imperfectly and usually informally. John J. McCloy reports that oil company executives "came down to the State Department constantly to talk . . . about the [political] situation in the respective countries. . . . It was simply a matter of exchange of information." At the same time, the State Department had apparently developed no expertise in oil and no unified policy. The logistics of international oil—delivering oil where and when it was needed—as well as all investment decisions stayed in corporate hands. A similar situation seems to have prevailed in Britain and the Netherlands. There were many informal discussions, but the international oil business remained in the hands of the oil companies.[28]

In 1969, Col. Houari Boumedienne of Algeria took measures against foreign investors in oil, just as the American-headquartered El Paso Natural Gas Co., not an oil company, was negotiating with Algeria on natural gas imports for the United States. Apparently the American government did not want to upset these delicate deliberations, and it thus made no vigorous representations on behalf of the American oil companies. The representations from other home governments proved an inadequate deterrent to Boumedienne's expropriations.[29]

Libya acquired a new government in September, 1969. Aware of Algeria's successful nationalizations, it pressured its nation's oil exporters for higher oil revenues. Occidental, an American independent with substantial stakes in Libya, was the most vulnerable target. Threatened with the loss of its properties, Occidental capitulated to Libya's demands in September 1970; the other foreign oil companies in Libya reluctantly agreed to similar terms in the month following. George Piercy of Exxon later explained that Libya "was willing to cut its revenue to get . . . its . . . price objective." Libya had bargaining power in its large currency reserves and a very small population, so it could accept "a reduced income." [30]

The home governments were informed by the companies of Libya's moves, but they apparently did not intervene in the negotiations. However, when other oil-exporting countries set out to follow Libya's example, and there seemed to be a ratchet effect from one oil-exporting nation to another, and when OPEC, meeting in Caracas in December 1970, insisted on added payments to all the producing countries, then the majors, independents, and consumer government firms felt concerted action to be essential. Shell called the companies together.[31] Wary of the antitrust consequences, the American firms turned to the Justice Department for a formal clearance, which they received. The State Department was informed of the negotiating plans, as were the home governments of the European companies.[32]

Thirteen companies originally signed the message to OPEC that was written by the companies in New York; eleven more subscribed

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[28] Interviews in Iraq and India, 1965; Peter Odell, *Oil and World Power* (Baltimore, 1970), p. 163. McCloy testimony, *Church Committee Hearings*, part 5, pp. 259, 275.

[29] Wilkins, *Maturing*, p. 369; El Paso Natural Gas, *Annual Reports; Petroleum Intelligence Weekly (PIW)*, April 22, 1974, pp. 3–4.

[30] Statement and testimony of Piercy, *Church Committee Hearings*, part 5, pp. 214, 196, on reasons companies capitulated.

[31] Testimony of Schuler, Irwin, and Piercy, *Church Committee Hearings*, part 5, pp. 78, 80, 111, 112, 146, 214–15; *New York Times*, December 16, 1970.

[32] *Church Committee Hearings*, part 5, *passim*. Testimony of J. D. Bonney (Socal), in *ibid.*, part 7, p. 383; testimony of William P. Tavoulareas, *Church Committee Hearings*, June 6, 1974 (still unpublished).

later. American, British/Dutch, French, Belgian, German, Spanish, and Japanese companies participated.[33] The independents in Libya, aware of their vulnerability, asked for assurance that, if they took a strong stand, the majors would back them. The U.S. Justice Department gave qualified approval on January 15, 1971, to a Libyan producers agreement that guaranteed the major multinationals would take care of the independents, should the latter be required by the Libyan Government to reduce production or be expropriated. This meant that the majors would—out of their diversified oil supplies—provide the independents with adequate crude oil to meet their commitments. The companies established a London policy group to prepare a unified negotiating stand. In New York, a group of company representatives gathered to comment on policy decisions proposed in London and to provide expertise. Home governments were kept informed.[34]

On January 16, 1971, the companies' message was delivered to Iran, to each of the other OPEC member countries, and to the OPEC office in Vienna. "We believe," the message read, "that it is in the long-term interest of both the producing countries and consuming countries alike, as well as that of the oil companies, that there should be stability in the financial arrangements with producing governments." The statement proposed "all-embracing negotiations" between the oil companies' representatives and OPEC.[35]

On the same day as this message was delivered, U.S. Undersecretary of State John N. Irwin began a Middle Eastern trip, ostensibly to provide the companies with support. In fact, however, he effectively undercut the oil companies' unified stand. He talked with the American ambassador, the Shah, and the Iranian Minister of Finance, and he left the impression with all of them that the U.S. Government would accept separate negotiations for the gulf states and Libya. Irwin, assured by the statements of the Iranians that the gulf producing states would enter into a 5-year agreement and hold to it, and feeling that the Iranian posture was moderate—at least compared to the extremism of Libya—recommended to the State Department that the oil companies would be well advised to open discussions with the gulf producers and to conduct separate, parallel negotiations with Libya.[36] The State Department passed this suggestion on to the oil companies on January 18–19.

The companies, which were to start talks with the gulf producers in Teheran on January 19, thus found the State Department proposing a last-minute reversal in strategy; they were dismayed at Irwin's position and the State Department advice. As late as January 30, a few were still arguing for all-embracing negotiations, but by then they no longer seemed feasible. The companies agreed to conduct separate negotiations.[37] Later, a representative of the independent Bunker Hunt Oil Co., one of the last holdouts, would see this as a disastrous turning point. More tactfully, George Piercy of Exxon would look

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[33] *Church Committee Hearings*, part 5, p. 215, and part 6, pp. 234–35. The non-U.S. signatories included CFP (France), BP (Britain), Shell (British/Dutch), Petrofina (Belgium), Gelsenberg (Germany), Hispanoil (Spain), and Arabian Oil (Japan).

[34] *Ibid.*, part 5, pp. 81, 249, 19, 81, 147, 215, 253, and part 6, pp. 224–30.

[35] *Ibid.*, part 5, p. 113, and part 6, p. 62.

[36] *Ibid.*, part 5, pp. 266–67, 85, 117–21, 148–49, 152, 156, 159, 167–68.

[37] *Ibid.*, part 5, pp. 149, 151, 163, 221, 87, 88, 134, 136, 215–16, and part 6, pp. 67 ff.

back on Irwin's role and say that while he, Piercy, was "disappointed, . . . it may have had a moderating influence on some of the oil-producing countries." [38]

It has been suggested that the major oil companies did not bargain against raising prices during the negotiations because they wanted higher prices themselves. It has also been suggested that the American government was likewise not particularly concerned over oil prices rising. While it does seem clear that the major oil companies were not content with the low prices of the 1960's, it also seems obvious that if prices were to increase, they would want to be the ones to profit. They were not eager to have the host governments obtain a larger share of the revenues at their expense. What the major corporations most wanted was predictability, stability, and security of supply.[39] They feared that, should the market price for oil fall, the share of the profits going to the host government would rise. Thus, the companies bargained vigorously against increases in posted price so long as they were attached to a formula permanently commiting them to pay large sums to the host governments. In establishing their negotiating posture, moreover, there was by no means unanimity among the majors: it has been reported that Exxon was more ready to yield to the Gulf producers' demands than was Shell, for example.[40]

On February 14, 1971, the Teheran agreement between the companies and the Gulf producers was signed. It gave the producing states an initially sizable rise in per-barrel revenue with annual modest upward adjustmets for the subsequent 5 years. Presumably in exchange, it assured security of supply and stability in the industry for the same period.[41] The companies capitulated at Teheran in exchange for the promise of stability. Further negotiations were then carried on with individual countries. The Tripoli talks, which began in March and ended on April 2, gave Libya an additional premium for its valuable low-sulphur oil as well as for its nearness to European markets.[42] Agreements were concluded separately on oil carried from Iraq and from Saudi Arabia to the eastern Mediterranean by pipeline.

The Teheran-Tripoli agreements proved to be unstable, as subsequent events led to the price, embargo, and participation crises of 1973–74. When the United States devalued the dollar in August 1971, and again in February 1973, with no thoughts about oil, the producing states immediately demanded and obtained modifications of the Teheran-Tripoli accords.[43] The companies kept their home governments informed of negotiations on "the positions taken by the producing countries and the interests of the consuming governments at stake in the outcome of the negotiations." [44] Because the U.S. Government

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[38] *Ibid.*, part 5, pp. 82 ff., and 118 ff. (Schuler testimony), 217 (Piercy testimony); see also McCloy testimony, *ibid.*, pp. 264–69.

[39] Piercy of Exxon stated, "We made every effort to minimize posted price increase and to assure some security of supply." *Ibid.*, part 5, p. 217. See also Socal's J. D. Bonney's impassioned testimony on price increases, *ibid.*, part 7, pp. 377–78 ("We were part of a company group dedicated to minimizing the posted price increases that the Libyan government was trying to force on us").

[40] Industry sources have suggested the differences between Exxon and Shell. Exxon's most important Middle Eastern investment was in Saudi Arabia, so it wanted its relationships with Saudi Arabia to remain as satisfactory as they had been over the years. Shell, with no interests in Saudi Arabia, had no special relationship to safeguard there. The difference in interests may well have been responsible for the reported variations in negotiating posture.

[41] *Church Committee Hearings*, part 5, pp. 149, 216.

[42] *Ibid.*, pp 100, 149, 216.

[43] *Ibid.*, p. 150.

[44] Testimony of George Piercy, *ibid.*, p. 217, and McCloy's memos, part 6, p. 297 ff.

had delayed approval of new offshore oil leases and of the Alaska pipeline the growth of new oil supplies had been retarded, and this in turn negatively affected the companies' negotiating position. When Libya attempted, in 1972, to market oil from the BP concessions that it had expropriated the previous year, the United States and British Governments—along with the major oil companies—tried without success to block the sale of this "stolen" oil. The Soviet Union, Bulgaria, Rumania, the Brazilian State oil company—Petrobras—and the Italian State oil company—ENI—bought from Libya. Moreover, when the U.S. Government contacted private American companies to ask them not to purchase the "hot" Libyan oil, Washington received the reply. "We would be delighted not to take the oil, if you can show us where we can get some oil." [45] The State Department was equally ineffective in aiding the companies in their 1973 boycott of Libyan oil. Again, American domestic firms, which had contractual obligations and no alternative sources of supply, were prepared to buy the Libyan oil.[46] Neither in 1972 nor in 1973 did the American Government order private American companies not to make the purchases.

As noted earlier, over the years the companies operating in the Arab States had recognized that American policies favoring Israel made their position difficult. On May 3 and May 23, 1973. Aramco executives paid courtesy calls on King Faisal of Saudi Arabia. On those occasions, the King insisted that the American Government change its Middle Eastern foreign policy. At the second meeting, he warned that Aramco might "lose everything." Corporate officials communicated the substance of both meetings to Washington. On May 30, executives of Aramco's parent companies—Exxon, Mobil, Socal, and Texaco—met with White House, State, and Defense Department representatives. The reaction in Washington, according to corporate correspondence, was "attentiveness," but the feeling there was that the King was "calling wolf." The corporate dispatch noted "there is little or nothing the U.S. Government can do or will do on an urgent basis to affect the Arab/Israeli issue." [47] Corporate needs and U.S. Government policies were separate and distinct. Home governments were consulted, and they listened and occasionally intervened, but basically they left international oil problems to the companies.

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[45] *Ibid.*, pp. 21–22, 27.
[46] *Ibid.*, pp. 39–41, and part 6, pp. 320–21.
[47] Corporate cables and memos, in *ibid.*, part 7, pp. 504–09.

The Oil Companies in the Crisis

(By Robert B. Stobaugh)

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THE COMPANIES AS MANAGERS

The rivalry among American companies was demonstrated first of all in the negotiations of 1973 over "participation," that is, over the takeover by the OPEC nations of part or all of the ownership of the producing assets within their boundaries. The management of Socal suspected that Mobil, historically a company short of crude oil, would break ranks with the other three Aramco parents in order to obtain a greater share of the oil that the Saudis were to make available. Mobil owned only 10 percent of Aramco, whereas the other three parents had 30 percent each. Otto Miller, the chairman of Socal during the negotiations later told a Senate subcommittee: "I think that probably by hook or by crook they—Mobil—might end up with more than what they own." [35] This issue surfaced on September 12, 1973, in a meeting of the four companies' chief executive officers and their representatives on the Aramco board. Exxon, Texaco, and Socal favored a course of action that was unsatisfactory to Mobil, whose representatives informed the group: "we are putting you on notice of our reserving the right to make our case individually with SAG—Saudi Arabian Government—if the group effort fails." [36]

The oil companies, saddled with the responsibility for allocating the available oil, faced a formidable task. I know of no evidence to suggest that the parent companies met during the embargo to decide upon, or even to discuss, the problems of allocation; the principal efforts, it appears, were made by each company individually. Each operated a complex chain of facilities, starting with the production of crude oil and ending with a petroleum product delivered to consumers. Adding to the complexity is the fact that each produced 100 or more types of crude oil, and each crude is somewhat different from the others, both in terms of impurities—such as sulfur—and the composition of the hydrocarbons. Each refinery is consequently also somewhat different from the others; if a refinery designed to operate on a light Libyan crude oil were used to process a heavy Venezuelan crude, its capacity would be reduced, its equipment subject to corrosion, and its products of inferior quality. [37]

Managements normally solve the resulting problems with the aid of computers, which can take into account the capabilities and constraints inherent in the system, such as availability of tankers, quality

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[35] *Hearings, op. cit.*, June 20, 1974, p. 456.
[36] *Ibid.*, pp. 528–29.
[37] *Hearings, op. cit.*, October 11, 1973, p. 46.

Source: DAEDALUS Fall 1975.

of crude oil, capacity and processing capabilities of refineries, and products available for trade from other firms. The computer programs also take into account any constraints specified by management, such as allocations of products to a given country, and they indicate how available crude oil should be allocated to maximize profits. During the oil crisis, however, the computer was often by-passed because instructions from the producing nations had removed much of the companies' freedom of action, and management wanted to exercise maximum control over those few decisions that were left to them. The resulting problems of supply and distribution were enormous. One manager told me that he rebalanced his company's worldwide distribution system once a week during the height of the oil crisis. His company, which operates dozens of refineries and over 100 ships, was faced with continuous changes in both production levels and demand schedules, and also, from time to time, changes in the quotas set by the Arabs.

The power of the companies to control the oil flow had already caused uneasiness among the consumers in the months prior to the embargo, and this turned into downright panic during the embargo's early stages. Especially prevalent was the conviction that companies would give priority to their home countries. This belief was reflected in statements by both Europeans and Japanese in the early months of the embargo that American companies were diverting "the bulk of their supplies to meet their U.S. shortfall,"[38] and it continued to reverberate around the world long after the embargo had ended. It was equally widely believed that since the Arabs had established priorities giving some countries proportionately more oil than others, this would actually result in some countries receiving more oil in total than other countries. A report by the European Economic Commission stated:

> The Middle East crisis has not affected all member countries in the same way, since at the start of the crisis two countries—and later three—enjoyed a privileged position (France, United Kingdom, and Belgium).[39]

Information obtained from interviews with both companies and governments concerning the rules used by the majors to allocate oil among the consuming nations revealed that by and large the companies sought to distribute the impact of any shortages more or less equally among the users in different markets. A directive of one American major rationalized this goal as serving three purposes: minimizing the risk of litigation and reprisal by the governments of the consuming countries; maintaining political neutrality; and maintaining the company's role in serving as a buffer and providing flexibility of supply from many sources.

Of course, implementing such an approach requires a definition of "demand" in each market, and that definition could vary considerably with each company. Nevertheless, their underlying rationale did seem to be to "equalize suffering," no doubt in part because it could be construed as a policy of maximizing profits over the long run. For supplying oil primarily to the markets that seemed most lucrative at the moment probably would have increased the risk of government reprisals and could eventually have adversely affected profits.

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[38] *The Economist*, "Multinational Business Report," December 1973, p. 1.

[39] Directorate-General for Energy, Commission of the European Communities, "Chronological Summary of Developments in the Oil Crisis Which Have Affected Community Supplies," XVII/110/74–E, p. 6.

Some of the majors issued written directives. For example, officials in one company issued a two-page memorandum calling for the allocation of the company's supplies of crude oil on the basis of quantities supplied for the first 9 months of 1973, and they subsequently worked out an international allocation system for oil products after headquarters had received more information. To enforce its policy, the company set up an Emergency Supply Task Force comprised of high-ranking officers. The initial directive, adopted on November 6, had to be revised on March 26 to take into account the fact that supplies in prospect for the United States were considerably smaller than had first been anticipated. Another major established guidelines of a more general nature: (1) contractual obligations to provide crude and products to nonaffiliates were to be respected, although volumes were to be reduced where *force majeure* provisions of a contract applied; (2) the remaining petroleum supplies were to be distributed on "as fair a basis as possible" to affiliates, taking into account for each consuming country such factors as inventory position, indigenous supplies, and the outlook for industry supply and demand. Other companies used less formal systems. For example, two majors reported that they issued no policy directives, but simply made specific allocation decisions on the basis of their evaluations, made in a series of discussions among the top management, of alternative sources of energy and relative dependence on foreign oil supplies.

In addition to the perceived risks from governments in not allocating oil "fairly," oil executives felt a great deal of pressure from the company's managers in marketing areas, and this reinforced their efforts to "equalize suffering." A vice-president in charge of the Far East region, for example, would not, without strenuous protest, allow the European region to be given an abnormally large share of the pie. Similarly, the manager of a French subsidiary would attempt to protect his interests by ensuring that France would receive a "fair" allocation compared with, say, West Germany or the United Kingdom. The importance of internal organizational pressures is illustrated by the actions of the chief executive officer of one American major, who compelled his area managers to hammer out an allocation scheme in nonstop face-to-face negotiations held at headquarters.

The so-called "independent" oil companies faced a simpler task in allocating oil than did the majors. First of all, they were smaller, and therefore they had fewer persons involved in the allocation process. Second, with fewer sources of supply and fewer national markets, their choices were more limited. Instead of operating with general guidelines and allocating internationally, they could make ad hoc decisions on each specific allocation problem. For example, one company cut off its shipments of Libyan crude to the United States and did not replace them from other sources since its American refinery was designed to process low-sulfur Libyan crude and its alternative source oil was too high in sulfur content. As a result, the United States received no oil from this independent, while other Nations received even more from it than they had before embargo.

THE ADVICE AND PRESSURE OF THE OIL-IMPORTING NATIONS

In addition to the pressures that emanated from their own distribution network and from their customers, practically all oil companies

were exposed to—and sometimes experienced—pressures from governments. So far as the U.S. Government was concerned, there is no evidence that any attempt was made to direct oil to the American market during the embargo period. Perhaps American officials realized, as John Tillotson had put it three centuries earlier, that "they who [are] in highest places, and have the most power, have the least liberty, because they are more observed." [40] But, whatever the reason, at the three meetings Secretary Kissinger held with American oil executives between October and December 1973, although he asked a number of questions about supply and how the oil companies were handling it, his only request was that the companies keep the existence of the meetings strictly confidential.[41] Another oil executive, whom I interviewed, told a slightly different story; he said that Kissinger had asked the companies "to take care of Holland." Another American company executive reported that he was told on visits to the State Department and the Federal Energy Office in late October to share available supplies among consuming governments. The testimony of John Sawhill, the head of the Federal Energy Administration (the successor of the Federal Energy Office), before a Senate subcommittee generally confirmed this: the U.S. Government, he said, urged the international oil companies "to bring as much as possible" into the United States, but at the same time, "[to recognize] the interest of all of the countries of the world in having some kind of equitable share of the world's supplies." [42]

British Government policy required that crude-oil deliveries from all companies,[43] including those headquartered there (British Petroleum and Royal Dutch/Shell), not be reduced. The Secretary of Trade and Industry told the House of Commons on November 15, 1973, "There is no need to introduce any scheme of rationing on the information available to us," and referred to "assurances from Arab states." [44] Prime Minister Heath called executives of British Petroleum to a meeting to insure that the United Kingdom would receive preferential treatment because it was on the Arabs' priority list. BP executives, undaunted, maintained that they intended to treat all nations—including Britain—equally. Each would receive an immediate 10-percent cut in supplies and a subsequent 15-percent cut. Heath reportedly exploded, an episode sometimes referred to by British civil servants as Heath's "temper tantrum." BP executives remained adamant, saying that laws and the contracts for delivery written under those laws took priority over instructions from their shareholders (a reference to the fact that the government owned 48 percent of BP's stock, although by tradition did not concern itself with operations); they suggested that Mr. Heath have a law passed if he was not satisfied. Three days later, Heath decided that it would not be wise to pass a law dealing with oil supplies, because of possible adverse effects on Britain's relations with its European allies.

Royal Dutch/Shell was also briefly a target of the Prime Minister's wrath. Heath was reported to have been very angry when he learned

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[40] John Tillotson (1630–1694), in *Reflections*.
[41] *Hearings, op. cit.*, June 20, 1974, p. 450.
[42] *Hearings, op. cit.*, June 5, 1974, p. 1129.
[43] *Petroleum Intelligence Weekly (PIW)*, November 5, 1973, p. 1.
[44] *New York Times*, November 6, 1973, p. 58.

that Royal Dutch/Shell was applying a uniform percentage reduction to all customer nations, but he took no action. In answer to a question about his company's relation with Mr. Heath, G. A. Wagner, chairman of Royal Dutch/Shell, stated that when the pursuits of national interests by different nations produce conflict, the governments should sort it out for themselves.[45]

Although political leaders in the British Government apparently expected preferential treatment for the United Kingdom, its civil servants were more sympathetic to the "equal suffering" policy of the majors. This is illustrated by their complex negotiations with Exxon over supplies for a recently expanded refinery in Britain. The new refinery capacity was designed to run on Saudi Arabian crude and to replace products that previously had been shipped to Britain from European refineries. But when the Arab cutback came, Exxon based its allocation to each country on crude-oil imports of a prior period and hence the British share was lower than it would have been if the new refinery capacity had been put into operation earlier. When Exxon reported its crude-oil allocation to the Government, the British civil servants pointed out that Exxon was a major international company with many sources of crude oil, that they expected the United Kingdom to receive at least its fair share, and perhaps a bit more, and that—not incidentally—it is the Government that decides who gets oil rights in the North Sea. To reinforce the point, Lord Carrington, a senior official in charge of international affairs at the Ministry of Trade and Industry, reminded Kenneth Jamieson, Exxon's chairman, in December that Exxon had served the British for eighty years and had 25 percent of the market. Exxon increased its planned shipments to Britain. The extent of the effect these pressures had is unclear, however, because simultaneously the total output of Arab oil was increased.

France, another large consumer on the Arab's priority list, was probably the best organized government in the world when it came to dealing with the oil industry. For five decades it had allocated domestic markets among the companies, and it had played an international role through its support and partial ownership of the company often called the "eighth major"—Compagnie Francaise des Petroles (CFP). In addition, the government completely owns Elf-Erap, a company that primarily serves France, but also has several foreign sources of crude oil and several national markets.

French government officials, who had available a list of oil deliveries scheduled by each company from each producing nation, instructed the companies to deliver as scheduled all oil from nations whose production was not cut (Nigeria, for example) and to deliver the oil designated for France as a priority nation (from Saudi Arabia, for example). Only oil from the nations that had reduced output but did not have a priority list (Kuwait, for example) could be cut back.[46] The French officials seemed certain that the companies would obey their instructions. The government owned 100 per cent of Elf-Erap and 42 per cent of the voting shares of CFP, where it had two board members and approved the selection of the president. In addition, any for-

[45] *Transcript*, "Dutch TV Interview with Mr. G. A. Wagner on 4th December, 1973," p. 9.
[46] *Middle East Economic Survey*, November 5, 1973, p. 1; interviews with company officials and government officials.

eign company not in compliance would face the possibility of losing its license to operate in France. France also expected special treatment by Algeria to offset whatever cutbacks it might suffer. The Algerian government instructed both the CFP and Elf-Erap to send their entire output to France, thereby cutting off deliveries of Algerian oil by these companies to other nations. Algeria also ordered non-French companies to maintain their shipments of Algerian oil to France, thereby routing still more Algerian crude to that country.[47]

In spite of all these directives, on November 21, 1973, the majors announced December delivery cuts for France of 10 to 15 per cent. Although the government had never veered from its original instructions to the companies, the companies, even the two French companies, had also never promised to follow them. The only difference between the French and foreign companies, so far as the government was concerned, was that it had access to the records of the former but not of the later. The CFP allocated its available supplies on the same pattern as the majors. When disagreement arose between the government and the CFP about planned deliveries to a neighboring nation, the CFP won the dispute and delivered the oil. Elf-Erap also continued to deliver oil to its non-French customers, although the amounts were small because France had always comprised most of Elf-Erap's market. Nor did the Algerian government's policy help France as much as might have been expected. Sonatrach, the Algerian national oil company, refused to give the French companies all of the oil indicated in the Algerian government's announcement and instead sold it on the open market.[48]

In spite of the gap between official instructions and company performance, an open break did not develop between the French government and any company. By February, 1974, the crisis in supply was clearly past, and negotiations between the companies and the government began to center on price controls. An industry group, composed of CFP, Elf-Erap, and the local subsidiaries of the majors, jointly brought up the subject of the need for higher prices. The common front of the French-owned companies and the foreign-owned subsidiaries was further emphasized when a complaint from Air France, the state-owned airline, charged that the French and foreign-owned oil companies were dividing Air France's oil purchases among themselves along geographical lines, rather than competing for the airline's business. The general manager of CFP simply replied that "CFP had ceased to deliver fuel to Air France within France because the prices the airlines offered were too low." [49]

During its negotiations with the oil companies, the French government shielded the stresses and strains from the French public. Jean Charbonnel, Minister of Science and Industrial Development, sought to allay any fears by announcing in November that France had a 90-day stock of oil and that supplies were coming in normally. He also maintained that the foreign companies were diverting oil from France to other countries where prices were higher,[50] reinforcing the

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[47] *Middle East Economic Survey*, November 23, 1973, p. 14.
[48] Company interviews.
[49] *New York Times*, November 9, 1974, pp. 41–43.
[50] *New York Times*, November 22, 1973, p. 61.

myth that the CFP and Elf-Erap, being under his direct control, were the salvation of France in the crisis

But Britain and France were not the only nations to put pressure on the companies. For example, Italy also told the companies that it expected full, normal deliveries of crude oil.[51] Italy and Spain restricted exports to the United States, Norway, and Sweden,[52] and Belgium licensed exports.[53] The companies feared that many other restrictions would be placed on the oil trade in Europe.[54]

On the other hand, the reader hardly needs reminding that the oil companies were not powerless in their negotiations with the consuming nations. For example during the embargo some compaines told the Dutch and Italian governments, among others, that if they blocked exports of oil products to the United States, crude oil would be shipped elsewhere.[55] In fact, one company that I interviewed routed oil bound for Italy to its British refinery, because the British government allowed it to export products. Belgium provides another example: In March, 1974, Petrofina, headquartered in Belgium, joined ten other oil companies in boycotting Belgium in order to obtain higher prices for their refined products in that country.[56]

The Netherlands was on the Arab's embargo list and was therefore in a precarious position. The relationship between the Dutch government and the oil companies has not yet been fully revealed. Prior to the embargo, the Netherlands was receiving some 71 per cent of its oil from Arab sources.[57] The chairman of Royal Dutch/Shell mentioned on television that it would provide all nations (presumably including the Netherlands) with the same percentage of the supplies that they had received in September, 1973.[58] But the government still felt insecure and instituted rationing in January. Rationing was abandoned in February, however, when the government announced that supplies were running only 15 per cent short.[59]

Apparently the West German government placed little pressure on the companies over supplies. Instead, it took measures to restrict consumption, including a ban on Sunday driving and the enforcement of speed limits. The government then relied on "free-market" prices, hoping that this would bring in the oil demanded by consumers.[60]

On the other side of the world, the situation in Japan, more heavily dependent on imported oil than any other major industrial nation, was confused. Japanese sources claimed that they were suffering from severe shortages because oil was being diverted by companies to their home countries, especially the United States. The overall cut in oil deliveries to Japan was reported in the Japanese press to have been 30 per cent.[61] and some Japanese reports gave an even higher figure. In late November, 1973, the petroleum association of Japan, which represents the domestic refining industry, predicted that arrivals of crude

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[51] *PIW*, November 5, 1973, p. 1.
[52] *PIW*, October 29, 1973, p. 5; October 15, 1973, pp. 3–4, and December 3, 1973, p. 4.
[53] *PIW*, November 19, 1973, p. 10.
[54] *Ibid.*
[55] *PIW*, November 5, 1973, p. 2.
[56] *PIW*, March 18, 1974, p. 4.
[57] *Middle East Economic Survey*, November 2, 1973, p. 1.
[58] See reference 45.
[59] *The Economist*, January 26, 1974, p. 87.
[60] *The Economist*, December 8, 1973, pp. 84–85.
[61] *The Economist*, "Multinational Business Report," December 1973, p. 1; cf. also the article by Yoshi Tsurumi in this issue.

oil in January would be 50 to 70 per cent below "normal" levels; and for the period December through March, it expected that arrivals would be down 36 per cent.[62] Meanwhile, however, there was little evidence of any actual diversion, and supplies held up remarkably well. In November, 1973, Japan announced its new pro-Arab policy, and it was placed on the Arab's priority list.

The Japanese government then turned its attentions to the companies. The head of MITI summoned the majors to a meeting to warn them abount diverting non-Arab oil from Japan. The companies replied that they were allocating oil as fairly as possible and that they would gladly hand over to the governments the thankless task of deciding who got what.[63] In fact, as the embargo continued, the Japanese government seemed to have been pleased with the results—executives of one major told me that Japanese government officials, upon reviewing the company's allocation system during a visit to New York, said that they were satisfied with it. In addition, Japanese firms lobbied continually at the headquarters of the majors; the president of one American major told me that for a time during the embargo he was visited by a contingent of Japanese almost every week.

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One obvious possibility is that the companies deviated from the "equal suffering" rule in order to serve the markets with the highest prices. But the admittedly fragmentary evidence does not support this hyopthesis. For example, prices in West Germany were not controlled and so were higher than in France;[69] yet the oil companies in general, including the American majors, supplied France more generously than West Germany. Moreover, price differences between the various countries persisted, suggesting that some sort of allocation process was applied. In February 1974, for example, Iranian crude oil was imported into the United States at an average value of $7.55 a barrel, compared with $8.61 in West Germany, and the average value of Nigerian crude delivered to the United States was $11.86, compared with $14.70 for Japan.[70] In neither case was the difference in freight cost likely to have accounted for much of the difference in price.

Another possible explanation for the observed variations in the market is that the oil companies favored large customers over smaller ones, or ones with a favorable long-term outlook over those with an uncertain one. But these possibilities also gain little support from the data.[71]

Still another explanation for the differences in treatment might be that Government influence did have its effects. But the data do not conclusively support this hypothesis either. To be sure, the United Kingdom and France, both relatively well supplied by the American majors, were on the priority lists supplied by some Arab countries, and both countries also applied government pressure on the oil companies.

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[62] *The Economist*, December 1, 1973, p. 103 and December 8, 1973, p. 84.
[63] *The Economist*, December 1, 1973, p. 103.
[69] Company interviews.
[70] National import statistics of each country with local currencies translated into American dollars at then-prevailing exchange rates.
[71] For example, with an independent variable of "imports in the period one year before the embargo period" and a dependent variable of "imports during the embargo period divided by imports during the year-earlier period," an R^{-2} of .02 was obtained for data covering the five American majors and a .11 for data covering the eight American independents.

Yet, in terms of total energy supply from all sources, France seems to have been supplied below the average for the rest of Western Europe, particularly the United Kingdom and the Netherlands. Even the relatively large supplies of oil received by the United Kingdom could equally well be explained as an attempt on the part of the oil companies to compensate for a coal strike that had simultaneously occurred in Britain. Furthermore, Japan, apparently the best served of all the markets, does not appear to have applied any more government pressure than did the other countries. Nevertheless, whatever the exercise of government pressure might have achieved in general, it is clear that pressure from home governments on firms headquartered within their own boundaries did not play a major role in determining the allocations of supply.

The most plausible explanation for the differences in treatment during the embargo seems to be a combination of random events and imperfections in data and in the measurement of shortage. Different companies undoubtedly used different bases from which to compute their allocations. Differences in inventory levels among countries and aberrations in computed averages caused by the bunching or scattering of tanker deliveries would also undoubtedly have caused deviations from the anticipated norm in deliveries within a precisely defined time period.

Given the circumstances, the companies on the whole did an efficient job of allocation during the oil crisis. As a Federal Energy Administration report concluded,"It is difficult to imagine that any allocation plan would have achieved a more equitable allocation of reduced supplies." [72] Nevertheless, the experience of the American majors in helping to manage the shortages of world oil during the embargo seems to have changed their view of the function that they might appropriately play in the future. Prior to the embargo, it would have been difficult to find an American company official who thought it was the responsibility of governments to allocate oil during a criss—these officials would have taken for granted that the companies would have that task. After the embargo was over, however, a number of company spokesmen, presiumably worn by pressures and stung by the criticism that had resulted from their handling of the situation, began to claim that it was the responsibility of governments to determine the allocations.[73] The companies seem to have learned an important lesson, succinctly phrased two and a half centuries ago: "Those who in quarrels interpose must often wipe a bloody nose." [74]

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[72] Page 10 of Federal Energy Administration publication, reference on table 4.

[73] For example, see statement of Emilio G. Collado, director and executive vice president of Exxon, to the Subcommittee on Multinational Corporations of the U.S. Senate Committee on Foreign Relations, June 6, 1974, p. 5.

[74] John Gay (1688–1732) Mastiffs, p. 401b.

The Distribution of Power

(By Raymond Vernon)

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THE ROLE OF THE MULTINATIONAL ENTERPRISE

The intensity of the debate over the growth and role of multinational enterprises in recent years has distinguished the controversy from the ordinary squabbles over trade, payments, and investment which are the usual fare of international economic relations. Even the term "multinational enterprise" in itself, though apparently devoid of value judgment, has been attacked on the ground that it subtly conditions the direction of the ideological struggle. The intensity of the debate suggests that the disputants regard the multinational enterprise as a symbol for some larger issues—socialism against capitalism, labor against management, Europe against the United States, or the Third World against the industrialized countries.

In this atmosphere, extravagant projections have become the stock-in-trade of discourse. Three or four years ago, it was fashionable to assert that many nations were rapidly becoming so weakened by multinational enterprises as to threaten their national existence. Today, with the oil crisis fresh in mind, it has become equally fashionable to speculate that multinational enterprises are on the way out.

My own expectations do not fit either mold. Under modern conditions of transportation and communication, multinational enterprises have managed to develop some major sources of strength. These strengths do not apply uniformly to all industries—textile firms, for example, derive fewer advantages from the multinational form than, say, chemical firms. Even where the multinational structure provides advantages to an enterprise in a given industry, changes in the nature of the industry can alter these advantages—in some cases increasing in some cases diminishing them. But for some industries at some stages of their development, the multinational form offers decided advantages.

The dominance of multinational enterprises in the oil industry over the past 40 or 50 years was based on a variety of factors. The major companies drew their strength partly from their monopoly power, expressed in the fact that the cost of Middle East oil to them was much lower than the cost of that oil to their competitors. But they also built their strength on the diversity of the markets to which they had gained access, the diversity of their sources of crude oil, the economies of scale in the operation of tanker, storage, and refining facilities, and the economies in the use and reuse of technical, political, and market information. All these advantages played some part in inducing newcomers to adopt the multinational form. The proliferation of these

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Source: DAEDALUS, Fall 1975.

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new companies, as I have suggested elsewhere, also contributed to the eventual weakening in position of the original majors.

One of the key decisions that the State-owned oil companies in the exporting nations will have to make in the next decade has to do with the distribution of their oil. They must decide how to discharge their responsibilities for marketing very large quantities of crude oil and oil products. If long-term bilateral barter arrangements prove to be of limited utility, as I think likely, other means will have to be considered. One is to pursue the traditional strategy of the oil industry—acquiring and controlling facilities in key foreign markets for the further fabrication and distribution of products. Another is to develop partnerships and alliances with potential competitors, in order to increase geographical spread and avoid competitive conflict.

Policies of this sort on the part of the oil-rich countries may not be confined to the oil industry. Over the course of the next 5 years, these countries plan to commit $100 billion or so to the creation of industrial plants. These facilities will for the most part be large-scale, capital-intensive, energy-consuming establishments, manufacturing such products as plastics, iron and steel, aluminum, and fertilizers, and requiring consistently high rates of production for economic stability. Captive customers in foreign markets can generally provide a critical part of that stability.

So long as the exporting countries consider that they have a sellers' market abroad, the urge to find captive customers can be held in check. But even if these countries feel secure for the present my assumption is that the feeling will not last for very long. Eventually, perhaps even initially, these new plants will be confronted with the formidable task that faces any seller in a capital-intensive industry—that of making inroads into an established market. Not many industrialized countries are likely to tolerate widespread price-cutting as a means of entry; so the new sellers will face the task of making their arrangements within the established channels of distribution. One obvious method for doing this is for the State-owned companies to create a series of partnerships with existing enterprises in the importing nations. Indeed, I find it difficult to picture how the major part of the industrial output of the oil countries will be marketed without such partnerships.

In projecting the development of partnerships between these new companies and the already existing corporations in the industrialized nations, one is actually describing tendencies that already are visible. The fact that these companies are State-owned has not inhibited them from creating partnerships with privately owned foreign enterprises. So far, the partnerships have been largely for the servicing of home markets. But, if past experience is any guide and if a few early illustrations are indicative of future trends, as I think they are, the ramifications of these partnerships will eventually extend far beyond the home country. Perceptions of common interest and the potential threat of competition are likely to condition the behavior of the managers of the new State-owned oil companies, just as in prior decades they conditioned the behavior of the officials that directed the European State-owned firms, BP, CFP, and ENI. There may be periods of independent market behavior on the part of these State-owned companies as they try to break their way into the existing markets. But, like ENI, their desire for stability seems likely to grow in measure as their market share increases.

If I am right that the oil-rich countries will find themselves under considerable pressure to cultivate new ties with multinational processors and distributors in the importing countries, one is back to considering whether multinational enterprises, acting individually or collectively, will after all figure more prominently in future international relations. My guess is that they will not, that individual enterprises as a rule will carry less weight, and that groups of enterprises will encounter more difficulties, not fewer, in any efforts to act collectively. One needs much more evidence before drawing any firm conclusions on this complicated question, but extrapolations from the oil crisis itself offer some provocative indications.

The oil industry, along with many others, registered a sharp increase in the number of its multinational enterprises after World War II. Studies conducted in about 25 other industries so far clearly demonstrate the same strong tendency. Almost without exception, these industries show an increase in the number of enterprise operating on world markets. As a corollary, these industries also display a decline in the relative importance of the established industrial leaders.

An increase in the number of firms in a given industry does not, of course, inevitably reduce the strength of individual firms or reduce their ability to pool their strength in an industry cartel. In fact, there are signs that in some industries, even as the number has proliferated, the leaders have tried to guard the industry against instability. In a few cases, formal cartels have been created. In others, partnerships among producers have become more common. But my guess is that, just as in the case of oil, the increase in the number of multinational enterprises in other products has weakened the old leaders individually and the multinational enterprises collectively.

Nevertheless, the tendency for each individual multinational enterprise to command a smaller share of the world market and the reduced ability of multinational enterprises collectively to control the market are unlikely to solve the problems that many governments see in the operations of multinational enterprises. In a world of open economic boundaries, governments feel more secure when their national economies operate through institutions that are national in structure, on the assumption that they are easier to direct and control. In many commodities, multinational enterprises may be necessary to carry on effective international business simply because of advantages that go with the multinational form. Where that occurs, the existence of such enterprises will remain disconcerting and even threatening to some governments. That reaction is present in some measure in all countries, as recent American responses to the growth of foreign-based investment in the United States demonstrate. So the issues presented by the growth of multinational enterprises are likely to continue with unabated vigor.

Moreover, the oil crisis has exposed one particular situation in which multinational enterprises as a class may keep on exerting considerable influence. The capacity of national governments to take over functions of distribution and rationing in an emergency is limited by their lack of expertise and by their need for time to react to the emergency. The capacity of any group of national governments to take on such emergency functions collectively is even more limited. In such situations, the least cooperative participant usually sets the pace. In emergencies that require the managing of complex international transactions,

therefore, it can be expected that governments will respond either slowly or not at all. Unable effectively to monitor, let alone to supervise, the activities of the multinational enterprises, governments may be tempted to leave the problem of management to the enterprises themselves. Whether this management by default will continue for long periods will depend on the technical complexity of the industry and on the national and international politics of control. But multinational enterprises will certainly not suspend their operations while the governmental mills slowly prepare to grind.

The continuing strength of the multinational enterprise will rest largely on its ability to perform its business tasks—developing products and processes, financing operations, and delivering goods and services. Such enterprises may also occasionally draw strength in international markets from the support of governments, as they have from time to time in the past. If that should happen, the political sensitivity of other countries to the manifestation of strength would be especially great.

The oil crisis also provides evidence, however, that governmental use of multinational enterprises as arms of public power has its limits. In the oil crisis, these limits were swiftly reached. None of the industrialized countries succeeded in obtaining greatly preferred treatment from the oil companies it thought of as its own, though one or two governments tried. On the other hand, oil-exporting governments did not necessarily have their way either; when Arab oil was embargoed to some destinations, the oil companies substituted oil from other sources.

The realization that multinational enterprises cannot be used simply as an extended arm of government is presumably a lesson already half-learned by the governments involved. In the decade ahead, the governments of many industrialized countries seem likely to hold "their" multinational enterprises rather more at arms' length than they have in the past, questioning even more strongly whether their overseas activities are contributing to the national welfare of the home country. Accordingly, the disposition of governments in the industrial countries to support their multinational enterprises in international affairs promises to be fairly subdued.

These developments should make no particular difference to those in the developing countries who base their opposition to multinational enterprises upon ideological grounds, such as the issue of socialism versus capitalism. The issue will remain alive on that level, affecting the national policies of this country or that. My guess is, however, that the ability of the multinational enterprise to survive is likely to rest mainly on grounds that are more empirical in character, namely, on the perception of many countries that the suppression of these enterprises would be costly to the national interest.

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An Interpretation

(By Raymond Vernon)

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THE INDEPENDENTS AND THE MAJORS

The next point in our collective analysis needs to be introduced with a certain deliberate emphasis, lest its significance be overlooked. It has become commonplace in current discussions of the oil crisis to refer to the monopoly power of OPEC, suggesting that it was the key element in explaining the behavior of the world's oil markets in the midseventies. Some of my colleagues, including Penrose and Wilkins, draw attention to quite another change in market structure as important during the fifties and sixties; the growth of the so-called independent oil companies. In my view, the rise of the independent companies is central to an explanation of the events of the seventies. Stated differently, the crisis that commenced in October 1973, would be much harder to picture if the six or seven oil companies that dominated the international oil trade at the end of World War II had continued to maintain the same degree of domination. This is a view shared by others who have written in this volume, though only a few would give it the same weight that I have.

The word "independent" in the context of the oil industry is not always understood. As a rule, the term is applied to any large oil company standing outside the group that was operating in the Middle East at the end of World War II. The original group—the majors, so-called—includes Exxon, Mobil, California Standard, Texaco, Gulf, British Petroleum, Royal Dutch/Shell, and the Compagnie Francaise des Pétroles. Their working relationships, through punctuated by outbreaks of rivalry, go back well before World War II. The other companies, the independents, had to develop relationships both with the majors and with each other.

A factor that prevented some sort of working equilibrium in the industry after World War II was the extraordinary cheapness of oil from the Middle East—and, later, from Libya as well. Few independent companies at the end of World War II had the organizational strength or the financial resources to break their way into the more obscure and remote areas of the Middle East. From the viewpoint of any independent company, whether located in the United States, Europe, or Japan, the threat that the majors might use their Middle East oil as a competitive weapon for enlarging their positions at the expense of the independents was always very real. Such companies were compelled to build their business of refining and distributing oil and oil products on relatively expensive crude oil—oil acquired sometimes from high-cost sources in the United States and elsewhere, or oil purchased from the majors themselves. The oil purchased from

the majors came on all sorts of terms, depending on time, place, and relationship; what these terms were are well-kept business secrets. But whatever they were, they left certain large independent buyers acutely uneasy about their competitive position in relation to the majors.

The first entry for the independents in the Middle East came with the reopening of the Iranian oil business in 1954, 2 years after the expulsion of the British-owned operating company and the shutting down of the Iran oil fields. In the constitution of an Iranian oil consortium, the U.S. Government insisted that a number of independent, American-based oil companies be included, along with Exxon and Mobil. This policy gave certain independents the advantage necessary for acquiring the organization and experience essential to successful operation in the Middle East. From that moment on, a dozen or so independent companies leaped the heretofore difficult entry barriers of the international oil market, appearing as crude-oil producers in Libya, Algeria, and various countries of the Middle East.

To say that the independents leaped the barriers, however, is not quite to describe the effects of their entry. At the time of entry, each independent company had less at stake than any major company in safeguarding the system of agreements in the Middle East and Africa that had existed between the companies and the governments. Having no outstanding agreements with the host countries that might be damaged by a new arrangement, an independent company had little to lose in proposing or accepting an agreement that would cede a somewhat larger share of the rewards to the host country, so long as Middle East oil remained cheaper than that available from other sources. An independent could generally assume that the majors would eventually be obliged to accept the same terms. Accordingly, if the majors were prepared to pay 55 percent of their profits in taxes to the host country, it made good sense for the independents to offer 57 percent; if the majors were willing to cede 20 percent of the ownership of their producing facilities to the host country, it was good business for the independents to offer 40 percent.

Of course, eventually the independents would develop a stake in the existing arrangements similar to that of the majors, but that would come only later when they had established a large supply of cheap crude oil for themselves. Meanwhile, from the viewpoint of the majors, the presence of the independents in crude-oil activities in the Middle East and Africa created a new sort of vulnerability. Once an independent company succeeded in establishing a supply of crude oil in the Middle East or North Africa, that source was likely to constitute a much larger proportion of the aggregate supplies of the enterprise than would be the case for one of the majors. In difficult circumstances, when foreign oil companies might be facing a negotiating showndown with a host country, the independents in the group would be most vulnerable to the threat that their oil might be cut off. The results were predictable. As Penrose, Wilkins, and others suggest, at critical stages in the negotiations between the oil companies and the oil-exporting countries that took place between 1970 and 1974, the vulnerability of one independent company or another to the pressure of a host government was generally the factor that broke the deadlock.

From 1954 on, the share of the profits retained by the oil companies in the production of crude oil had begun gradually to decline, moving to well under 40 percent by the late 1960's. As a result, the profits recorded by the majors fell from about 80 cents per barrel of crude oil to about 30 cents. At the same time, the share of the international crude-oil market accounted for by the majors also fell, dropping from about 90 percent in the early 1950's to about 70 percent 20 years later. For some years, the dampening effects of these trends on the majors' crude-oil profits were offset by the rapid increases in the volume of oil sold. By 1970, however, the scissors effect was becoming too much for the major companies; their bid for a 5-year agreement at Teheran can be seen as a defensive effort to reestablish some measure of stability in a situation in which their control seemed to be ebbing.

With hindsight, it may appear that the majors could have delayed the shift in the balance of power between themselves and the oil-exporting countries if they had been prepared to bolster the negotiating position of the independent companies in the period of crisis by offering alternative sources of oil in the face of an oil country's threat. Indeed, that is precisely what the major companies did, though for only brief periods and in special situations; to sustain a strategy of that sort would not have been easy. For one thing, certain of the independents were genuinely entitled to their sobriquet, and preferred to hold the majors at arm's length, hoping to snatch a larger share of the market from them. Moreover, the habits of accommodation and forebearance among the majors, though well developed, do not appear to have been strong enough to prevent their having certain qualms about how the others might behave in a crisis. There were other difficulties involved in agreeing jointly about a long-term policy to deal with an assorted bag of independent companies. Besides, especially with respect to the American companies, the antitrust laws continually cast their shadow.

Whatever the reasons, the relatively tight control that the majors had been able to exercise over the international oil market in earlier years was probably bound to erode, crisis or no crisis. Signs of that trend appeared long before October 1973, and multiplied as the majors began, in the early 1970's, to adjust to the growing shortage of crude oil. It is difficult to say how strongly they favored their own captive customers in the adjustment process; Stobaugh, for example, believes that, where oustanding commitments existed, the majors tried to fulfill them. Still, some large-scale users of crude oil, such as public utilities and industrial processors, were obviously growing anxious.

What happened as a result of that anxiety in the early 1970's would have been unthinkable in the 1950's; as supplies dwindled, a number of customers went to the Middle East and Africa to see if they could satisfy their crude-oil needs directly. That such a possibility was entertained was the consequence of many developments, including certain changes in the capabilities of the oil-exporting countries themselves. The trend, however, can be ascribed principally to the revolutionary shrinkage in international space, and also to the striking improvements in international communications that have become common in recent decades.

In the immediate aftermath of the October, 1973, war, the needs of certain of these bulk buyers of crude oil grew so powerful that they were prepared to pay any price. By that time, also, state-owned companies in some of the oil-exporting countries were directly engaged in the sale of a small part of the oil sold in international markets. For a brief time, free oil offered by the exporting countries fetched unheard of figures; sales of $17 a barrel and more were reported. Stobaugh guesses, and I am inclined to agree, that the extraordinary size of the price increases imposed by the Shah of Iran at the time was largely triggered by the obvious disposition of certain buyers to pay them. In any case, neither OPEC nor OAPEC—the all-Arab group of oil exporters—was the prime mover.

Some observers have suggested that the reason the major oil companies failed to take steps to reduce the panic of the free-wheeling bulk buyers after the outbreak of hostilities in the Middle East was that they welcomed the higher prices and higher profit margins that this panic-buying induced. Though this assumption may seem reasonable to some, the published record, as reported by Stobaugh, suggests a very different set of facts. At that early stage in the crisis, the leading international companies were deeply concerned by the breathtaking price increases that were being imposed.

Despite the erosion in the position of the majors that had been going on during the 1950's and 1960's, the habits of accommodation were quite strong enough for them to manage the extraordinary pressures during the first stage of the crisis, when security of supply was thought to be the critical problem. Such accommodation, because it was largely passive in form, consisted mainly of mutual acquiescence in modifying old supply relationships throughout the world.

Indeed, the first and most important level of adjustment of the major companies took place inside their respective international networks rather than between them. The adjustments within each system required the rerouting of crude oil and tankers, the altering of refinery schedules, and the allocation of supplies to competing buyers. The second level at which the international oil companies responded to the crisis involved them in a complex set of mutual interactions. Every major company was linked to practically every other one through a series of joint producing and refining ventures, long-term bulk purchase agreements, and long-term reciprocal supply arrangements. Where joint facilities existed, they normally required joint operating decisions: the output of Aramco in Saudi Arabia, for instance, as well as that of the Iraq Petroleum Co., was partly determined by an intricate bargaining process among the major companies. When output was restricted by governments, as it was during the crisis, there was still room for the reapportioning of the output.

Throughout these processes of adjustment, according to Stobaugh, the major oil companies used a standard of "equal suffering" among importing countries. A standard of that sort cannot be precise; it left considerable leeway in its application. The U.S.-based majors exhibited no signs of greatly favoring the American market; British Petroleum—half-owned by the British Government—showed little sympathy for its government's claims for preferred treatment; France's Compagnie Francaise des Pétroles insisted on a consideration of the interests of its non-French connections; and so it went.

In general, the international oil companies responded to the emergency situation with the conditioned reflexes of entrepreneurs minimizing their risks at the margin. The patterns of oil distribution in the crisis, dictated by the principles of greatest prudence and least pain, were curiously non-national. Anyone looking for confirmation of the view that it paid a country to have an oil company based within its own jurisdiction would have found scant support for such a hypothesis in this brief episode in the oil industry's history. Whether the outcome would have been the same had the shortage persisted for very long was never tested.

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[Excerpt from Oil and Security, Stockholm International Peace Research Institute, Humanities Press, New York, November 1974]

Recent Economic and Technical Agreements Between Oil-Producing and Oil-Consuming Countries

France-Iran: Agreement signed for vast long-term cooperation in energy development and industrialization. The deal may include an order for five nuclear power stations from France. Value: $4.5 to $5 billion. February 9, 1974. [355]

France-Libya: Agreement signed providing for the exchange of Libyan oil for French nuclear powerplants, refineries, harbors, telecommunications and other joint investments—including the joint financing of projects in France, Libya and third countries. Estimated value: $5 billion. February 19, 1974. [356–357]

France-Saudi Arabia: First deal comprising the delivery by Saudi Arabia of about 27 million tons of crude oil in exchange for such equipment, goods and services as are designed to assist Saudi Arabia's program of industrialization. Value: not known. Beginning January 1974. [337]. An even larger deal involving as much as 800 million tons of crude oil over 20 years is under discussion. Value: not known. End January 1974. [340–341]

Federal Republic of Germany-Iran: Decision in principle between the two governments providing for FR Germany to build an oil refinery and petrochemical complex in Iran, which will be the world's largest. Part of the project is expected to be financed through the sale natural gas by Iran to FR Germany, possibly transported in pipelines via the Soviet Union. Long-term oil supplies, in return for the West German contribution, have also been discussed. Value: $2.2 billion. End January 1974. [358]

Italy-Libya: Agreement concluded under which Libya will supply Italy with 30 million tons of oil a year—to be compared with 23 million tons for 1973. Italy's contribution will be goods and services for the industrialization of Libya. Value: not known. February 25, 1974. [359]

Italy-Saudi Arabia: Saudi Arabia has agreed in principle to supply Italy with an additional 20 to 30 million tons of oil in the next 3 years under an economic, technical and industrial agreement between the two countries. Value: not known. Beginning February 1974. [360]

Japan-Iran: Proposal made by Japan to Iran involving loans and credits to be earmarked for the construction of a refinery, a petrochemical plant and a cement plant. Value: $1 billion. January 10, 1974. Later reports indicate, however, that Iran cancelled the deal on March 4, 1974. [361–363]

Japan-Iraq: Agreement signed under which Japan will receive 160 million tons of crude oil and oil products over 10 years in return for undertaking petrochemical refining and other industrial projects. Value: $1 billion. January 17, 1974. [364]

Sweden-Libya: Agreement reached for a 10-year cooperative program under which Libya will deliver 2 million tons of crude oil a year

to Sweden in exchange for steel, timber, paper, and cement. In addition, Sweden will build tankers and merchant carriers for Libya. The two countries will also investigate the possibility of Libya helping to finance the construction of an oil refinery in Sweden. Value: not known. March 6, 1974. [365]

United Kingdom-Iran: Agreement providing for Iran to exchange about 5 million tons of crude oil for British deliveries of textile fibers, steel, paper, petrochemicals and other industrial goods. Value: $240 million. January 25, 1974. [366]

United States-Iran: Tentative agreement between the Iranian Government and five U.S. refining companies for the joint construction and operation in Iran of what could be one of the largest refineries in the world (with an output of 500,000 barrels per day). Value: $500 to $750 million. November 8, 1973. [367]

United States-Saudi Araba: Agreement in principle reached between the two governments on more active U.S. support in the industrialization of Saudi Araba and in the supply of its requirements for defensive purposes. Value: not known. April 5, 1974. [368]

Agreement, signed on June 9, 1974, provides for the establishment of two joint commissions, one on economic cooperation and the other on Saudi Arabia's military requirements. Four working groups have been created: industrialization; manpower and education; technology research and development; and agriculture. These are to prepare recommendations for the Economic Commission. The two governments agree to consider setting up an economic council for the private sector, to foster further cooperation. [342]

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World Oil Cooperation or International Chaos

(By Walter J. Levy)

Rarely, if ever, in postwar history has the world been confronted with problems as serious as those caused by recent changes in the supply and price conditions of the world oil trade. To put these changes into proper perspective, they must be evaluated not only in economic and financial terms but also in the framework of their political and strategic implications.

I need not dwell here on the overwhelming importance of oil for the energy requirements of every country in the world; nor do I plan to elaborate on the fact that—except for the United States, the Soviet Union and a small number of countries that are, or will become, self-sufficient—most of the nations of the world will, at least for the foreseeable future, depend almost entirely on imports from a handful of oil-exporting countries, with an overwhelming concentration of oil production and reserves in the Persian Gulf area of the Middle East. Among those countries in the Gulf, Saudi Arabia is predominant in terms of reserves, production, and most important, in the potential to provide significant expansion of supplies. Inevitably, producing decisions by Middle East governments, especially Saudi Arabia, will play a pivotal role in future world oil availability and pricing.

Over the last 3 years or so, oil-producing countries have in fact taken over complete control of the oil industry in their countries. They have coordinated their efforts through the Organization of Petroleum Exporting Countries (OPEC) which was established in 1960. Since 1970, producing governments have imposed in rapid succession changes in previous agreements that had been negotiated and renegotiated with their concession-holding companies, predominantly affiliates of the Anglo-American international oil companies. These changes were arrived at under the threat that if the oil companies would not acquiesce, the producing countries would legislate such changes unilaterally or expropriate the concessions. In October 1973 the last vestige of negotiations was abandoned and producing governments unilaterally set posted prices on their oil.

In the exercise of this power, Middle East producing countries have raised their government oil revenues from taxes and royalties from about 90 cents per barrel in 1970 to about $3 per barrel by October 1973 and then to $7 per barrel by January 1974. In addition, as a result of the participation agreements between the producing countries and the oil companies, the governments earn additional income from the sale of their newly acquired oil. Its amount, of course, depends on the percent of government ownership and the price they charge for their oil. Agreements had been concluded, as recently as late 1972, under which producing countries acquired a 25 percent participation

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Source: *Foreign Affairs*, vol. 52, July 1974: 690–713.

in the oil-producing operations and were also committed to sell most of their participation oil to the oil companies at agreed-upon prices; now producing countries are demanding that these arrangements be changed in their favor. Only a few arrangements have yet been concluded, but most of the producing countries will probably insist on at least the equivalent of 60 pecent participation and a price for the sale of their oil corresponding to about 93 percent of the posted price—both changes most likely to be imposed with retroactive effect as of January 1, 1974. On such a basis, the government income from the total oil-producing operations in key countries would average about $9.25 per barrel.[1]

Meanwhile, the oil income of the Middle East producing countries has increased from $4 billion in 1970 to $9 billion in 1972, and to a presently estimated $60 billion in 1974. The oil revenues of all OPEC countries are increasing from $15 billion in 1972 to nearly $100 billion in 1974. Allowing for all their own foreign exchange requirements, OPEC producing countries will still have available surplus revenues on the order of $60 billion this year alone. And there remains a clear and present danger that under conditions as they exist now, the supply of oil from individual producing countries or a group of them to individual importing countries or a group of them might—as in October 1973—at a time unknown, again be curtailed or completely cut off for a variety of economic, political, strategic, or other reasons.

The quick pace at which the producing countries have effected this radical shift in the balance of power is perhaps the most dangerout aspect of the current situation. Whatever the merits of their case (of which more later), the world faces frightening repercussions on account of the suddenness with which oil costs of importing countries and oil revenues of producing countries have been inflated. There just has been no time for mature consideration by the societies that have to deal with this new exercise of oil and financial power, be they recipients or dependents, producers or consumers.

The security of international oil supply operations is further affected by regional conflicts in the producing areas of the Middle East—in particular the still unresolved issues posed by the Israeli-Arab confrontation. There are other potentially dangerous and divisive possibilities, as reflected in Iran's policy of establishing herself as the major strategic power in the Persian Gulf and the Indian Ocean. This could, in due course, aggravate what is already a latent conflict between Iran and some of the Arab countries—not only Iraq, where the hostilities are acute, but perhaps even Saudi Arabia. There are also disputes between Iraq and Kuwait, unresolved boundary issues between Saudi Arabia and Abu Dhabi, and internal conflicts such as the Kudish problem in Iraq. Further problems are posed by inherently unstable governments in many of these areas and by uncertain and unpredictable rules for the succession to power.

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[1] Incidentally, Saudi Arabia has implied that in its judgment the present high level of posted prices would have a disruptive effect on the international payments accounts and should, accordingly, be reduced somewhat. While it might be difficult to obtain the support of OPEC for a cutback of posted prices, Saudi Arabia could easily achieve a similar result by reducing the price at which it sells its own oil to a level equal to the tax-paid cost of the companies' equity crude plus a per-barrel profit comparable to what the producing governments have said the companies are entitled to earn. Such a price would be some $3 per barrel less than 93 percent of posted prices.

Moreover, within the Persian Gulf area there are varying economic and strategic relationships between some of the producing countries and Western powers on the one hand, and the Soviet Union and even Communist China—on the other. Moscow is deeply involved in Middle East affairs and with the strategic and national policies of some countries, particularly Iraq and Syria. As the producing countries increasingly assert their oil and money power, they are also likely to become increasingly involved as hostage or pawn in any major power struggle.

How can the nations of the world handle this new situation? What is the role of the international oil companies? Above all, how can the producing and importing nations avoid a confrontation or simply a series of reciprocal actions that must tend more and more toward economic chaos and grave political danger? Is there a way to reconcile the various national interests and to achieve constructive overall cooperation?

II

The first key fact that must now be recognized is that the position of the international oil companies has changed completely over the past few years. Up to about 1969 the major concession-holding companies still could determine levels of production, investments, exports and prices. Moreover, they still possessed substantial bargaining leverage in their negotiations with producing countries, largely by virtue of the surplus producing capacity that obtained in the Middle East, and even in the United States into the latter sixties.

All this has now gone. The producing countries have taken over from the companies the power to set production levels, to designate or embargo export destinations, to direct investments and to set prices. The oil-producing affiliates of the international oil companies have become completely subservient to the directives issued by the oil-producing countries. Nothing perhaps reflects the present state of affairs more dramatically than the fact that American- and Dutch-owned oil companies had no choice last fall but to become the instruments for carrying out the embargo on oil shipments to their own home countries.

Thus, the companies no longer possess any real leverage. About the only role that is, in effect, left to them in established producing areas is that of a contractor providing technical services, getting in return some privileged access to oil—at costs and prices determined by producing governments. The extent of even this "privilege" and the time over which it will be available are subject to unilateral cancellation at any moment, as were all preceding arrangements.

At the same time that they have been deprived of effective control over their producing operations, the role of the international oil companies in consuming countries has come under increasing fire, fueled also by the recent sudden increase in company profits. During the emergency, consuming governments largely abdicated any effective role; the companies thus had to make far-ranging decisions as to allocation of supplies, pricing, treatment of nonintegrated companies, and many other issues. It was the companies that kept sufficient supplies moving to all countries; now, after the event, some of their decisions are being challenged by consuming governments. It is

extremely doubtful whether the companies still possess the necessary flexibility to cope with another similar crisis.

If the role of the major international oil companies in established producing areas is diminished, it is nonetheless important to understand what their remaining position is. The technical services they can provide are extensive, and vital to continuing development of the producing countries resources as well as to efficient producing operations. Moreover, none of the producing countries is prepared to handle alone the disposition of the huge volumes of production they control: The downstream facilities of the majors provide assured outlets for the mainstream of their production, while remaining quantities of crude can be sold directly or used to support refining and petrochemical production in their own countries or in joint ventures abroad.

Because of their size, scope, technical competence and financial strength, coupled with their important positions in the production and development of oil, gas, coal, shale, tar sands, and atomic resources in areas politically secure, the international oil companies are bound to play a major—if not the major—role in exanding dependable additional sources of energy supplies. Even though their foreign crude oil resource base is subject to progressive erosion, the major internationals will accordingly continue to provide for the importing countries over the years ahead the most flexible sources of energy supply.

However, the international oil companies are no longer able to assure the continuity or price of regular supplies to oil-importing countries. And while they can hope to maintain continued preferred access to substantial production in support of their affiliates' crude requirements, even that is uncertain and contingent on the producing countries' self-interest in extending such offtake rights.

Downstream investment in refining, marketing, and transport thus tends to become extremely risky, because the viability of such investment is predicated on secure supplies. Meanwhile, as a logical part of their own development program, producing countries are using their control over crude availability to spur refining and petrochemical investment in their own countries and to acquire tanker fleets—all of which will in due course add to consuming countries' foreign exchange import costs and adversely affect the flexibility and security of their supplies.

In the circumstances, oil-importing countries can no longer expect the companies to fulfill their earlier most important role, as an effective intermediary between the interests of producing and consuming countries. Nor can the international oil companies function, as in the past, effectively to preclude direct dealings between importing and producing countries relating to oil supplies, prices, et cetera, which may easily lead to political confrontations. To the extent that the companies maintain their operations in producing countries, they in fact reflect the producing governments' economic, political, and strategic policies. To be able to hold on to whatever tenuous residual rights or preferences the producing countries might still be willing to extend, the companies will have no choice but to acquiesce in virtually any kind of conditions imposed or exacted.

All this points to a far greater involvement by consuming-country governments in oil industry operations than heretofore. One major

objective will be greater "transparency" in oil company policies. Oil-importing countries cannot be in the dark with respect to negotiations in producing areas, when the decisions vitally affect the security and price of their essential oil supplies. They will want to know more about investment plans and policies in their own countries. And with transparency will inevitably come progressively more government interposition throughout internal oil economies.

But here, too, the international oil companies will have a continuing role to play. Producing countries will become increasingly involved downstream, as direct crude sellers and through investment. Consuming countries will become increasingly involved upstream, through various exploration and crude arrangements. Within this emerging fragmentation of world oil trade, the integrated facilities of the companies could provide an important, perhaps the major, core of efficient operations.

In sum, whatever arrangements on supply, financing, and pricing the oil companies may still be able to conclude formally with producing countries, in practice and underlying reality such arrangements cannot be ignored by the importing countries but are bound to be decisively affected by their policies. Moreover, with the vital concern the importing countries have not only for price but for availability of oil, it now appears inevitable that their governments will also in due course establish a comprehensive policy of surveillance and consultation—perhaps even some measure of control—with regard to oil company operations encompassing the whole range of oil activities vitally affecting their countries.

III

As the problems of oil have become matters that in many key respects can only be handled directly between governments, so their gravity has now become all too clear. Faced with the major "supply shock" of the October 1973 oil embargo and the overall cutback in Arab oil production, the immediate reaction of practically every importing country was to engage in a competitive scramble for oil supplies, coupled with offers to adapt its Middle East policy to Arab demands, and promises of all kinds of financial inducements. It was indeed a humiliating experience for historically independent and proud nations. What we were witnessing, in fact, was not only the fragmentation of the operations of the multinational oil companies, but also the polarization of the oil policies of the importing countries, with foreign petroleum ministers skillfully influencing individual importing countries through the device of handling out oil rewards and punishments.

Then, late in 1973, the advance in world oil prices dictated by OPEC countries was of such magnitude that practically every importing nation was suddenly confronted with major balance-of-trade problems of immediate and continuing effect. The cost of foreign oil supplies for all importing countries will exceed $100 billion in 1974, compared with some $20 billion in 1972. For developing countries alone, it will jump from $5 billion in 1973 to $15 billion in 1974—and the $10-billion increase will exceed all the foreign aid that these countries received in the previous year. Meanwhile, as noted, the OPEC producing countries

will accumulate, during 1974 alone, surplus holdings of foreign exchange not needed for their own import requirements of some $60 billion—or nearly two-thirds of the net book value of total U.S. private foreign investment.

Obviously, this surplus accumulation of funds will somehow be recycled into the world's monetary system initially, probably mainly into the short-term Eurodollar market. But this process will not necessarily result in the availability of loans to the various importing countries in accordance with their individual foreign exchange needs. The creditworthiness of the borrower will decide whether or not Eurodollar loans will be available; many of the developing countries and some developed countries will not qualify under this criterion. Foreign grants and soft loans—some of them probably never to be repaid—will have to be made available, and the Monetary Fund and the World Bank are addressing themselves to this problem. I doubt that anything like adequate amounts can be made available.

But the financial oil drainage is not only a short-term and passing issue. It will be with us for many, many years—if oil prices remain at present levels (or rise as is now occasionally threatened), and if the oil-producing countries themselves are not prepared to make favorable loan arrangements to needy countries in addition to whatever the developed countries are able and willing to do. To the extent that oil imports are financed by a continued recycling of surplus oil revenues via investments or loans on commercial terms, oil-importing countries will face pyramiding interest or individual charges on top of mounting direct oil import costs.

Equally if not more disturbing is the question whether or not the producing countries owning already large surplus funds will be willing to continue to maintain or to expand their production and accumulate financial holdings that might result, in part at least, in nothing but paper claims that could not be repaid. If the producing countries make direct foreign investments, the bulk of such investments will obviously be placed in the advanced developed countries, where it would appear to be safest and most profitable. That will leave the less-preferred developed countries and the developing countries out in the cold. Moreover, the scope for such investments owned directly by foreign producing governments is likely to be limited. Accordingly, oil-exporting countries with surplus revenues might well decide to reduce production—to conserve their liquid gold in the ground rather than increase potential paper claims above ground. Oil revenue surpluses could thus well conduce to oil supply shortage.

There are thus valid reasons to fear that even where present policies of producing countries provide for expanding oil production, circumstances might arise where, in what they consider to be their own self-interest or even for any political whim, the governments involved abruptly cut their level of oil exports. Kuwait, Libya, Abu Dhabi, Ecuador, and Venezuela have already announced restrictions in their production. Iran has threatened to do so if the importers object to price levels.

The financial dilemma for oil-importing countries is clear. In order to finance oil import costs, they will have to look to progressively expanded foreign investment by, or indebtedness to, producing countries. Without any amelioration in the cartel prices and payments

terms, the alternative for importing countries would be rather severe reductions in oil imports and oil consumption. To cut back imports drastically, to levels that could be financed out of current income, would hardly be a viable solution. The resulting shortfall in total energy, and the economic consequences of declines in production, employment and trade, would further undercut the oil-importing countries' ability to finance even sharply reduced levels of oil supplies. The contraction of energy consumption and economic activity would thus become a cumulative spiral.

In sum, the short- to medium-term implications of the present situation are simply not bearable, either for the oil-importing countries—especially the nations already needy—or for the world economy as a whole. In the wake of this topsy-turvy winter, with the Arab oil embargo against the United States now lifted, the temptation is momentarily strong to suppose that the oil cirsis has now genuinely eased. The major industrialized countries of the world once again look forward to economic growth, though at lower rates, with worldwide balance-of-payments deficits, and with a terrible economic and political problem of inflation, to which oil prices have made a substantial contribution. But the oil balance-of-payments burden is just starting and the transfer of funds to oil-producing countries just beginning. In any case, no significant lasting relief at all is in sight for the needy oil-importing countries. The fact is that the world economy—for the sake of everyone—cannot survive in a healthy or remotely healthy condition if cartel pricing and actual or threatened supply restraints of oil continue on the trends marked out by the new situation.

IV

As a first step, the insecurity of oil supply and the financial problems that have arisen clearly call for a wide-ranging coordinated program among all importing countries. This was the main reason why the American Government called for a conference of the major oil-importing countries in February of this year. This cooperative effort falls into two basic parts: First, what must be done internally by the importing countries; and second, what a coordinated policy should be vis-a-vis producing countries. With the oil-producing countries already cooperating closely through OPEC, cooperation among the oil-importing countries is a simple necessity; properly understood and handled, it can be the only way to achieve constructive overall adjustments.

Among themselves, the importing countries must first establish and coordinate their research and development programs with regard to existing and new energy resources. Unnecessary and time-consuming duplication must be avoided, and research and development efforts should be concentrated on those resources where optimum results can be expected. The skills available for research and the engineering resources that would have to be employed, if not pooled, should at least be utilized in accordance with a program for maximum overall efficiency.

The oil-importing countries must also establish a concurrent and consistent program of energy conservation which would provide for far greater efficiency in the use of energy resources. Here too the research effort and the measures to be taken should be coordinated on an international basis.

Whatever the course of foreign oil prices, policies to conserve consumption and to spur the development of alternative energy sources will remain relevant for the future. Moreover, a high degree of Government involvement is essential to the success of such efforts—including the probable necessity of Government guarantees putting a floor under the selling price of alternative energy sources. For if—as we shall see later—there is a chance that foreign oil prices will fall, then private interests working on projects for tar sands, shale, gasification of coal and the like, will not be willing or able to continue their efforts. If a major effort to develop alternative energy resources is to be sustained, particularly in North America, the criterion cannot be orthodox economic soundness weighing the price of alternative energy against the actual (or predicted) price of foreign oil. Rather, the decisive criterion must be the price to which foreign oil could and would *rise* if the alternative energy supplies were not forthcoming. The public interest in avoiding dependence on foreign oil dictates public support and a substantial measure of price guarantees by individual countries, notably the United States but perhaps others as well, again acting in coordination.

Third, the major importing countries must be able to agree on a problem that has so far eluded their efforts—that of adequate stockpiling and burden-sharing. On stockpiling, no importing nation should now have on hand perhaps less than a supply equal to 6 months of its imports. And there must be clear contingency plans for restrained consumption and for sharing, if oil supplies are again cut off or curtailed—whether for political or economic reasons. Remaining oil imports must be parceled out according to some formula based not on the previous percentage of imports from the sources cut off, but on the basis largely of need—so that those fortunate enough to possess substantial national energy resources would have the smallest, if any, claim on the oil still flowing. Beyond that, I do not believe it would be politically feasible to establish rules that would require countries able domestically just to cover their minimum requirements to export some of their domestic energy supplies to a less fortunate country.

Moreover, oil-importing countries must abstain from trying to resolve their balance-of-trade problems by unduly pushing their general exports to other oil-importing countries or by restricting their imports from them. Such policies would only aggravate the problems of these other countries. Competitive devaluation of currencies or inflation of export prices would be self-defeating, since the oil-producing countries clearly intend to adjust the level of oil prices in accordance with an index of currency values as well as the cost of manufactured goods and other commodities in world trade. The oil-importing countries may have to act in many other ways in order to avoid such dangerous repercussions as severe deflation and unemployment. To deal with the situation will require an unprecedented degree of self-restraint, prudent economic management and political sophistication and wisdom. Past experience suggests extreme skepticism that the countries will in fact consistently follow such policies. But if they do not, the consequences for all of them could become very serious indeed.

Bilateral transactions between oil-importing and producing countries or their respective companies will inevitably be of growing im-

portance. But in concluding such deals the importing countries must abstain from trying to obtain unilateral advantages—by making arrangements for oil imports that would tend to preempt sources of supply through discriminatory practices, or by transactions designed to tie up for themselves an excessive part of the import capacity of the oil-producing country. They must also resist the temptation to offset their oil deficits by the competitive rearming of the various Middle East countries, a practice bound in the end to produce a military disaster for all.

So much for the minimum initial requirements for cooperation among the major oil-importing countries. A measure of common appreciation does now exist for most of these "headings of cooperation" by at least a large majority of the relevant importing countries, although they have yet to be fleshed out by practical working arrangements or adequate guidelines for national behavior.

The hardest questions remain. Even if cooperation is achieved in all these respects, can it serve to do more than shorten the period of extreme vulnerability and cushion the impact of continued one-sided decisions by the OPEC countries? Is consumer cooperation truly adequate if it does not address itself to the key questions of price and supply?

I believe the answer to both questions is in the negative. When the brewing crisis came to a head last fall, the initial reaction of many importing countries was to try unilaterally to take care of themselves for both economic and strategic reasons—through barter arrangements, major investment offers to various producing countries, even in some cases extravagant arms supply deals. This tendency was an understandable reaction in the first phase of the new crisis, and indeed a continuing degree of individual national initiatives is not only inevitable, but can be healthy in some respects, in providing an infusion of economic and political alternatives into the changing relationships between oil-importing and oil-producing countries.

Already, however, the limits of the individual approach are obvious. Even for the most aggressive of the oil-importing nations, it has not worked effectively; they find themselves with very large obligations in return for very small increments of favorable treatment, or for nothing more concrete than a generalized promise for the future. Moreover, where there have been specific deals, these are as much subject to abrogation or revision as the basic arrangements themselves. "What have you done for me lately?" is not a question confined to the dialogue between politicians and voters.

Moreover, precipitate attempts by individual countries to go it alone can only obscure the nature of the problem, which is basically a common one that engages not only the interest of all the importing countries but the interests of the producers in a viable world economy and in their own regional and national political stability. The producers are bound not to see the problem in this light if one importing country after another posits this arrangement or that as its own selfish modus vivendi. And to defer attempts at resolution of the common payments problem while individual initiatives are being exhausted is bound to make eventual general agreement more difficult, because so many inconsistent cards will have been played.

Thus, it is my conviction that a constructive accommodation between the interests of producers and importers, enabling the latter to pay for and finance adequate oil imports, is possible only if the importing countries share a common appreciation of the need for a price adjustment as well as for the establishment of financial mechanisms to this end. Just as far-reaching cooperation among the producing countries has brought about the present situation, so a similar cooperation among the importing countries is now an essential prerequisite to a balanced solution. Only if the major importing nations act to coordinate their policy can they expect to be able to present the supply and financial problems they are facing in an effective manner—and to make clear the implications of these problems for the producers themselves. Moreover, only then could they impress upon at least the relevant producing countries what I believe are the two central elements in a satisfactory long-term arrangement—some downward adjustment in the level of foreign crude oil prices to all consumers, and specific relief, including long-term deferment of payments, for the neediest of the oil-importing countries.

V

If cooperation among oil-importing countries is essential to the development of constructive cooperation with producing countries, so too is a full and fair understanding by the importers of the case of the producing countries. Many of its key points were presented vividly in last July's issue of Foreign Affairs by Jahangir Amuzegar of Iran; these points and others have since been developed in a series of public statements by various leaders of producing countries. Nonetheless it helps to go over the main elements that enter into the attitudes of the producers, and to explore the validity of their arguments, seeking to arrive at a clear picture of what their long-term interests are.

A major goal of producing countries is rapid and consistent progress in their economic development so that they can become economically viable and secure by the time their oil reserves peter out. In the meantime, the pace of their industrial progress depends largely on the size of their oil revenues, and the level of oil prices is of decisive importance for their present and future prosperity.

The producing countries also cite additional reasons to justify the huge price increases that they imposed in the course of 1973. The large increase in oil prices, they say, is warranted by the alternative cost that would have to be incurred if oil had to be replaced by other energy sources such as shale oil, oil from tar sands, et cetera. Even though there is currently still a surplus of potential oil supplies, oil reserves may well be exhausted in perhaps 20 to 30 years. But in a free competitive market, prices would not, at this time, reflect future shortages of supply and would thus provide no encouragement for the development of substitutes. Accordingly, the oil-producing countries say that high oil prices are now necessary so that research and development programs for new energy sources will be promptly initiated. Otherwise, with the long lead time required, energy would be in short supply when world oil production begins to decline.

Also, so they argue, high oil prices now will result in oil conservation and encourage the use of oil for the most essential and valuable purposes where it cannot be so easily replaced, such as for petrochemical production. The highest value use, they maintain, should in practice be the basis for oil pricing.

The producing countries also assert that the high current oil prices redress the injustice of too low a level of prices in the past, when oil prices had fallen behind those of manufactured goods and food which the oil-producing countries had to import. Relatively low oil prices in the past have, they maintain, unduly enriched the developed countries at their expense. (Whatever the degree of validity of this argument for past periods, it should be noted that the increase in oil prices between 1970 and January 1974 has, according to a United Nations analysis, amounted to 480 percent and was extraordinarily larger than that of practically any other commodity. The share of petroleum in world imports of about $316 billion during 1970—the last year for which detailed statistics are available—amounted to about 7.7 percent; at January 1974 commodity prices, the value of 1970 imports would have increased to $618 billion, of which petroleum would have accounted for as much as 23 percent.)

Oil-producing countries are aware that high oil prices may harm the progress of other developing countries. But primary responsibility for economic assistance, so they postulate, rests on the rich developed countries. And even though oil-producing countries maintain that in development terms they are still poor, they have stated that they, too, will make a substantial contribution to support developing countries, and a number of them have indeed done so. In addition, they will endeavor to convince other raw-material-producing developing countries that they, too, could improve their economic position substantially if they would only follow the OPEC example.

The producing countries also complain that in the past they have been deprived of economic development based on their oil resources such as refineries, petrochemical plants, tankers, and energy-intensive industries. Instead, enormous quantities of gas have been flared. Accordingly, it is a basic part of their development policy that investment in local petroleum-processing plants should be undertaken on a large scale within the oil-producing countries, and that they should participate far more in the whole operation of the transportation and exporting of oil.

Oviously, there is substantial merit in many of the points now so forcefully advanced by the oil-producing countries—and it is no effective answer to point out that Western initiative was largely responsible both for the discovery of oil and for the development of its manifold uses. The major oil-importing nations, in particular, must give heed to the legitimate grievances and aspirations of the oil producers.

On the other hand, the producing countries cannot continue to take the position that the economic situation of the major importing countries is no concern of theirs. It is one thing to adjust oil prices to the real or imagined wrongs of the past, another to carry that adjustment to the point of jeopardizing the future economic, political, and strategic viability of importing countries. For if this happens, the viability of the producing countries themselves must surely be affected over the years to come.

There is thus no alternative for the importing countries but to try to convince the producing countries that there must be responsible accommodation between the interests of importing and producing countries. In order to carry conviction, it is essential that there be basic unity among importing countries about the underlying assessments and their policy goals. In the light of the extremely sensitive relationship between consuming and producing countries, a contrary position of one or two major importing countries would tend to destroy the effectiveness of this approach.

It would also further strengthen the producing countries in the sense of power that they believe they hold over importing countries, and would encourage them to conclude that they could effectively maintain their internal as well as external security in the face of evolving world chaos.

In actual fact, however, many producing countries, in spite of the extraordinary concentration of oil and money resources in their hands, are as yet quite fragile entities, without substantial strategic and military strength in world affairs. They have been able to assert themselves because of the disunity among, and unwillingness of, importing countries to take any firm position vis-a-vis the producing nations. Whatever the concern of producing countries and companies in the pivotal transition from surplus producing capacity to tightness of world oil supplies, the oil-importing countries were largely complaisant about the course of events. Now, unrestrained exercise of their oil and money power by producing countries presupposes that the importing countries will continue to acquiesce and remain passive, even if the world's economic and political stability is at stake. This cannot be a safe basis upon which the producing countries could proceed. If the worst is to be avoided, the producing countries must be made to recognize the danger of pursuing such a course.

There is also the danger that this concentration of oil and money resources would tempt the Soviet Union to make use of fundamentally weak and socially unstable producing countries—by proxy, so to speak—in order to undermine the economic and political stability of the non-Communist world. Soviet adventurism cannot be ignored, especially the application of Soviet power through controls over certain governments such as those of Iraq or Syria, as well as by internal threats through Soviet support of subversive opposition to governments. There exists, in practically every one of these countries, the potential for sudden revolutions by extreme elements.

All of these factors are clearly known to the various dynasties and national governments. Most of them must have inevitably reached the conclusion that their hold on power, which is sometimes tenuous, depends in the final analysis on a satisfactory relationship with the non-Communist world. We are all interested in the maintenance of a peaceful cohesion among Middle East countries. But they must recognize that if this cohesion is mainly used to enable them to enforce their will on the rest of the world through the use of oil and money power, they would not only undermine the position and strength of the importing countries but would also expose their governments and nations to extreme risks.

The oil-exporting countries must be aware that their own independence could not safely be assured if the United States and its allies were to be fatally weakened vis-a-vis the Soviet Union. It would not be in their self-interest to refuse to supply the vital oil needs of the world or to insist on an unmanageable level of prices, and risk the economic, political, and strategic consequences of such policies.

VI

So far I have been making the case for unprecedented cooperation among the oil-importing nations, and for much greater understanding by both producing and importing countries of each other's needs and of the common interests that affect both groups. If reason alone controlled human affairs, one might conclude that a satisfactory solution was possible from greater understanding alone.

Unfortunately, that is not the case. One must in the end come back to the harsh economics of the energy situation worldwide, and of the rapidly rising trends in oil consumption that have lain at the root of the present crisis. For it is these trends essentially—far outstripping the growth of indigenous energy sources—that have made the oil of the OPEC countries, especially in the Middle East, so vital to practically every nation of the world, and have thus given the OPEC countries the bargaining leverage to establish the present unilaterally controlled price and supply situation. With all the understanding and sympathy in the world, the producing countries cannot be expected not to use a bargaining position as strong as the present one of OPEC and its Middle East members. In last July's Foreign Affairs, Carroll Wilson argued that the United States would be placed in an intolerable state of dependence on Middle East oil if it did not develop other sources of energy to the maximum and at the same time curtail the rate of growth of its energy consumption from 4.5 percent to a suggested 3 percent. Essentially the same analysis must now be applied to the oil-importing nations as a whole, not for the sake of eliminating a critical degree of dependence on the Middle East—for that is simply not in the cards at least for the rest of this decade—but for the sake of containing thereafter the problems of oil supply and finance and of establishing now an acceptable degree of balance in the bargaining positions of producers and consumers of oil.

The starting point should be the period from 1968 through 1972, when energy consumption in the non-Communist world as a whole increased at 5.6 percent per year, and oil consumption by 7.5 percent per year. The result was that Middle East oil production went up by an average of 12.5 percent per year.

Now the prospect for the period from now until 1980 is for a substantial expansion in non-oil energy sources and in oil production within the major oil-consuming countries. Yet it remains as clear as it was a year ago that no drastic technological break-through is in sight at least in this time frame. We are still talking about natural gas, coal, hydroelectric power, and nuclear fission as the primary alternatives to oil—and one need hardly add that even substantial increases in some of these are still fraught with difficulty.

In response to the new situation, it is already reasonable to postulate some conservation at the margin in response to higher energy costs. Given the dynamic energy needs of Japan, the developing countries, and to a lesser extent Western Europe, however, it is difficult to see that conservation at the margin will in itself produce a dramatic drop in the growth of energy needs. Supposing, for example, energy consumption grew at only 4.6 percent per year instead of the 5.6 percent of the 1968–72 period, the picture might look something like this:

	1972[1]	1975[1]	1980[1]	1972–80 (average annual percentage growth)
Primary energy demand	80	91	115	4.6
From nonoil sources	35	38	48	4.0
Oil consumption	45	53	67	5.1
Indigenous oil production	18	19	27	5.2
Oil imports	27	34	40	5.0
Needed from the Middle East	18	23	29	6.3

[1] In millions of barrels daily oil equivalent.

Obviously, this is a broad-brush projection. But it is enough, I believe, to demonstrate two fundamental conclusions: (1) that even at current prices this rate of oil imports could not be sustained by the oil-importing countries on a current payments basis; (2) that with production increases fairly well spread among the producing countries, none would be under any pressure to lower prices or to increase production further. (This is a modest conclusion; actually the pressure would be greater for production cutbacks than for increases. The oil simply might not be forthcoming.) In short, mere conservation at the margin —itself more than many governments are now asking of their people— will neither avoid economic calamity nor provide a balanced situation vis-a-vis the producers.

To get these essential results I believe we shall have to go considerably further. Again for illustrative purposes, let us see what the situation would be if the oil-importing countries could manage genuine austerity in their use of energy, cutting their growth rate to, say, 3.3 percent. The reduced U.S. growth rate would have to be less than this; with all U.S. energy waste, it would still involve a major change in habits and ways. For Japan and the developing countries, the impact on production growth would be far more severe. In short, this kind of reduced rate of increase does deserve to be called austerity. In such a case, using the same assumptions for non-oil sources and indigenous oil production, a revised table would look like this:

	1972[1]	1975[1]	1980[1]	1972–80 (average annual percentage growth)
Primary energy demand	80	87	104	3.3
Oil consumption	45	49	56	2.7
Oil imports	27	30	29	.8
Needed from the Middle East	18	19	18	.1

[1] In millions of barrels daily oil equivalent.

This level of austerity would, I believe, be just adequate to permit the major industrialized nations to maintain viable economic and industrial operations, including continued growth but at a lower rate than might have been projected on the basis of previous oil prices and supply availability. Even then, most of the oil-importing countries would, at least until the latter part of this decade, be exposed to a very substantial and—in the case of some countries—nearly unmanageable financial burden. In short, while the deliberate initiation of such austerity would require an act of political will far exceeding what is actually happening in most importing countries, the choice will in the end be compelled by financial pressures. The longer it is put off the worse it will get.

Once undertaken, this austerity policy could in time achieve some trade balance between the producing and consuming countries. In particular, the huge annual accumulative of surplus funds by Middle East producing countries would start to decline about 1978 and would reach manageable proportions shortly thereafter. Put differently, the importing countries would in aggregate terms be able to pay for their oil by a steadily increased flow of goods and services to the producers. At the same time, however, since the ability of the importing countries to supply goods and services is concentrated in only a handful of them, the financial burden of oil imports would vary greatly, remaining very substantial for the less-industrialized developed countries and especially for the developing countries which are net consumers of oil. Thus, it would remain essential to have financial mechanisms and arrangements that would cushion this differential impact and make it bearable.

Turn now to the situation of the oil exporters. The second table suggests that their total exports would level off and then start to decline slightly by the end of the decade, as the importing countries managed to increase their nonoil sources of energy and as indigenous oil sources were tapped more fully—principally the North Sea and the North Slope in Alaska. The table also assumes that oil producers outside the Middle East will increase their total capacity somewhat, and will be motivated to produce at maximum attainable levels—since practically all of these nations need their oil revenues for immediate development purposes. Thus, the total demand on the Middle East would tend to decline by the end of the decade.

This is not to suggest for a moment that the Middle East oil producers would then be in difficulty. They would still be supplying more than 60 percent of the oil moving in world trade, and Middle East oil would remain vital to Japan, Western Europe, and the developing nations—in an austerity situation, any further cuts would reach the bone more rapidly than in the present somewhat "soft" situation. In short, the Middle East producing countries as a group would remain in a strong position.

At the same time, the production levels of individual countries in the Middle East would be placed seriously in question. Kuwait—like Libya in North Africa—is already pursuing policies designed to conserve its oil reserves and thus to stabilize output below previously attained levels of production. On the other hand, Iran and Iraq look to increase their production very substantially from present totals of roughly 8 million barrels a day to 12 to 13 million barrels per day.

If these trends were to continue, and if the need for Middle East oil were to level off at 18 million or so barrels per day, it is evident that the remaining suppliers—especially Saudi Arabia and Abu Dhabi which had previously benefited from oil revenues in excess of their development needs—would then have to accept a drastic reduction in their levels of production, or alternatively to seek to increase their output by reducing their prices—and thus giving consumers an incentive to ease up on their austerity.

It is an open question, which of course cannot be analytically resolved, whether in the light of these circumstances the various Middle East producing countries would decide to "fight it out" among themselves by competing for exports through price reductions. They might seek to go in the opposite direction, to enter into a production and export control agreement under which they would rearrange their respective production and export levels. At the same time, they might try to increase their prices and tax takes so as to provide for the needs of those Middle East countries that would have to reduce some of their previously anticipated production. On a rational basis, the latter course might be chosen, since any price and tax reductions would tend to force others downward as well, so that the Middle East as a whole would obtain lower revenues for the same or a higher level of production than before the initial price and tax reductions.

In trying to assess what under such conditions the producing countries might actually decide to do, we must think not only or even mainly in economic terms, nor draw only on past experience with regard to the cohesiveness of private cartels in similar circumstances. At most, the economic facts of supply and demand frame the problem; it will still be decided by national governments in the prodcuing countries, and their policies are likely to be governed by an extraordinary combination of political and strategic as well as economic factors.

On the basis of such a broad assessment, the short-term argument for controlling production and maintaining or further raising prices and tax takes must encounter a growing awareness of wider relevant considerations. For such a course—in effect responding to consumer austerity by higher producer prices—would surely leave the importing countries with even worse financial problems than are now in prospect. Even more heavily than now, the burden of paying for restrained but more expensive oil imports would fall upon lagging economies suffering from extremely serious financial problems. Even more than now, the producing countries would have to ask themselves whether they could expect to remain islands of prosperity in a worldwide depression, or of political stability when the will and ability of strategically powerful nations to support them had been eroded.

VII

To sum up, four elements are essential to move to a reasonable adjustment: Far-reaching cooperation among the oil-importing nations, an understanding by the importing nations of the interests and aspirations of the producing countries, a clear-cut—and painful—program of energy austerity by the oil-importing countries, and a recognition by the producing countries that even in an austerity situation any attempt to hold prices high must result in worldwide dangers to which

they could not be immune. Only with far-reaching consumer cooperation can it be expected that the producing countries will come to this necessary conclusion; at the same time cooperation without austerity will not do the job. Both are needed, and a large new dose of political will, not yet in sight, will be required to achieve them.

The key to a reasonable solution is time: To make the financial burdens on all oil-importing countries tolerable and to bridge the gap until the day, not too far distant, when the producing countries, at least in the aggregate, will have reached the point where they can be paid in goods and services—and where they will have joined, for practical purposes, the ranks of the developed nations.

And the basis for such an adjustment, in turn, is the acceptance of a principle that, while the sovereignty and control of nations over their natural resources remains unquestioned, such control cannot and must not lead to the unrestrained exercise of power, but must be based on a mutual accommodation of interests or, as the United Nations Declaration on the Establishment of a New International Economic Order puts it, on an appreciation of "the reality of interdependence of all the members of the world community." Otherwise it will be destructive to all.

Such a principle is not, of course, confined to the case of oil. The April meeting of the United Nations General Assembly, and the United Nations reports prepared for it, have underlined the degree to which the rise in food and fertilizer prices over the past two years—created in these cases by market forces in combination with national domestic agricultural policies—have damaged the interests of the needly developing countries in particular. The United States especially has it in its power to adopt measures that would ease the actual cost of food supplies to this group of countries; one suggestion would be that the United States provides grain and other crucial food to needy countries on concessionary terms or through the application of Public Law 480 funds. A similar move might be undertaken by the major countries that export fertilizer. Now, as preparations are underway for a World Food Conference in the fall, such moves would be even more in order, based on the continued operation of market forces for most consumers but with measures to cushion the impact on needy countries.

Oil remains the biggest and most difficult case. Since 1970 the price and availability of oil moving in world trade have been determined progressively by the OPEC countries unilaterally, to the point where the present situation effectively is one of price imposed by a cartel. Completely free market prices for traded oil are not a practical alternative; in a free market the existence of large reserves and the very low cost of developing and producing such oil would mean a market price that would be very low indeed. Such a price would not be acceptable to producing countries—since it would not provide them with the budgetary and foreign exchange revenue badly needed for their economic development. Nor would it in fact serve the interests of importing countries as a whole—since it would lead to wasteful consumption of oil on the one hand, and on the other would provide no inducement to the major countries to push forward in good time with research and development on new and more costly energy resources which will be needed even more once readily available supplies of oil begin to stagnate or decline.

Accordingly, the price of oil moving in world trade is bound to be a kind of administered price, not necessarily negotiated directly between producing and importing countries but at least established in a way that would attempt to accommodate and reconcile the economic and financial interests of both groups. In addition, the specific plight of the needy oil-importing countries should be provided for, if not through a two-tier pricing system, then at least by long-term deferral of payments and easy credit terms for loans.

In sum, I believe that the world situation would now call for solemn undertakings that would assure the essential oil requirements of all the importing countries on terms and conditions that are economically and financially sustainable. This should be accompanied by measures to deal along the lines proposed with the cognate cases of food and fertilizer. At the same time, it is imperative that all the necessary provisions be made to safeguard the essential economic interests of the producing countries into a future when their position will inevitably become less strong than it is at present. Such a combination of actions would be an act of statesmenship in which the oil-producing countries and the oil-importing countries could and should join not only for the common good, but perhaps even more so in their most cogent self-interest.

Today, governments are watching an erosion of the world's oil supply and financial systems, comparable in its potential for economic and political disaster to the Great Depression of the 1930's, as if they were hypnotized into inaction. The time is late, the need for action overwhelming.

The Future of OPEC

(By Richard B. Mancke)*

The worldwide havoc and resulting energy price explosion wrought by the Arab embargo of oil sales established the oil exporting nations who dominate the Organization of Petroleum Exporting Countries (OPEC) cartel as the key force shaping recent events in the international economic arena.[1] Realizing that OPEC oil has no substitutes available at short notice and that large new quantities of other kinds of energy will be available no earlier than the mid-1980's in most industrialized countries, it is easy to predict that OPEC will play a leading role in shaping the substance of international economic relations for a long time to come. After examining economic, political, and technological factors likely to affect the performance of world petroleum markets over the next 10 to 15 years, the ultimate aim of this paper will be to describe what OPEC's future role is likely to be.

I

The sum of exploration, development, and operating costs measures the total resource costs that must be incurred when producing crude oil or natural gas. Exploration costs are paid to the productive factors, such as labor and capital, used to search for new oil and gas reserves in areas where their presence is suspected but unsure. Development costs pay for constructing the facilities necessary for producing previously discovered reserves. Operating costs are incurred when running existing production facilities so that crude oil and natural gas may actually be extracted from their natural sources. These three types of resource costs are unavoidable if new petroleum reserves are to be found and produced.

Enormous geological variations distinguish oil and gas fields located in different parts of the world. Because Persian Gulf oil fields tend to be unusually large, numerous, and productive, the total costs necessary to find, develop, and produce the typical new barrel of this oil are less than 20¢.[2] In sharp contrast, much of the new oil that must be produced in the United States, if the goals of Project Independence are to be

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[1] All of the major oil exporting countries except Canada are members of the Organization of Petroleum Counties (OPEC). The recent embargo of oil sales was initiated by OPEC's Arab subgroup, the Organization of Arab Petroleum Exporting Countries (OAPEC). At the start of the Arab embargo OAPEC members accounted for roughly 60 percent of OPEC's sales.

[2] M. A. Adelman, The World Petroleum Market (Baltimore: John Hopkins Press, 1972), p. 77.

Source: *Journal of Business*, vol. 38, January 1975.

realized will come from small, scattered, low-productivity fields.[3] The total resource costs of large amounts of this oil will be between $7.00 and $11 per barrel.[4] This is also the expected range of costs for producing commercial quantities of synthetic oil from coal or oil shale.[5]

Besides explaining huge regional differences in the costs necessary to produce crude oil, regional differences in the likely size, incidence, and productivity of petroleum sources also explain why there are corresponding differences in the speed with which previously unplanned expansions in a region's oil output can take place. Specifically, because huge but underdeveloped reserves of low-cost oil have already been discovered in such Persian Gulf countries as Iran, Kuwait, and Saudi Arabia, their output can be expanded sharply merely by drilling the necessary additional wells and installing the appropriate surface-gathering and storage facilities. Because of the size and accessibility of these Persian Gulf oil fields, there is only about a 1-year lag between a decision to raise planned future output from these sources and when significant quantities of that new output can come on stream.[6] In contrast, specific locations of large hitherto undeveloped oil fields are simply unknown in most non-Persian Gulf oil producing countries.

Hence, large amounts of additional exploration are a necessary prerequisite for a large expansion of new oil supplies from these areas. Completion of this exploration will take several years. In addition, because newly discovered oil fields in these areas will usually be much smaller, less productive, and less accessible than new Persian Gulf fields, the time needed to develop them commercially is necessarily longer. For these reasons, the minimum lag between a decision to raise future crude oil output appreciably above presently planned levels and the date when large amounts of this output will first come on stream is presently 3 to 5 years in areas like the U.S. Gulf of Mexico or the British North Sea and up to 10 years in the Alaskan North Slope or northwestern Canada. In sum, because of the unavoidable exploration and development lags, changes in the previously planned rate of growth of a region's oil production act as if they obey the laws of inertia. Specifically, for a long time there is no visble payoff from steps taken to expand previously planned oil outputs. Then, only after most exploration has been completed and development of the newly discovered oil fields has begun, the first dribbles of new production appear. As time passes and development of the new field is nearly completed, these dribbles grow into a far larger stream. At this stage, relatively little additional effort is required to keep the supply of "new" oil flowing unabated for several years.

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[3] M. A. Adelman et al., "Energy Self-Sufficiency: An Economic Evaluation," Technology Review (May 1974), pp. 32–34.

[4] Ibid., p. 34. The resource cost of all U.S. oil will not be this high. For example, the resource cost of the average barrel of oil from Alaska's huge Prudhoe Bay Field was estimated by the government (in 1969) to be only 36 cents at the wellhead. Also, the resource cost of much of the oil from the U.S. Gulf of Mexico will be less than $2 per barrel. Unfortunately, the United States does not have enough oil in these low-cost sources to supply even current demands.

[5] Ibid., pp. 44–47.

[6] The lag between a decision to raise Persian Gulf oil output and when that new output can come on stream will be as short as 1 year only if drilling rigs, pipes, storage tanks, etc., are readily available.

II

The OPEC cartel was formed in 1960 in order to stop falling world oil prices. Nevertheless, because the growth of new oil supplies exceeded the growth of demand, world oil prices trended downward throughout the 1960s.[7] OPEC had failed to achieve its proclaimed goal. The cost of a barrel of crude oil had fallen to between $1.10 and $1.20 at the Persian Gulf in early 1970, but by mid-1974 it had soared to the neighborhood of $10. Why did world oil prices stop falling in 1970? Why have they exploded upward since?

The sharp rise in world oil prices had two proximate causes. First, beginning in late 1970, several OPEC countries threatened that access to their oil supplies would be denied to all buyers who did not agree to pay higher prices. Their customers soon capitulated to these demands; subsequent new demands also resulted in capitulations. These threats and capitulations led to steadily rising world oil prices between 1970 and mid-1973. Then, in late 1973, prices soared much higher when the Arab nations—led by Saudi Arabia—partially embargoed oil sales and thereby created a worldwide shortage. Why were the OPEC countries able to use their tactics successfully after 1970 and not before? The chief reason for this sudden turnabout was that around 1970 there occurred a dramatic change in the underlying supply conditions of the world oil market, greatly strengthening OPEC's hand.

Daily non-Communist crude oil output rose more than 8.3 million barrels over the 3 years between 1967 and 1970. Table 1 shows that 12 countries contributed significantly to this rise.[8] The four largest contributions came from Libya, Iran, Saudi Arabia, and the United States.

The year 1970 marked a transition in the world oil industry. Largely because already developed petroleum sources were being depleted faster than new supplies were being discovered and developed, production in three of the most important crude oil producing countries—Libya, the United States, and Venezuela—hit its all-time peak and has since declined. Between 1970 and 1973 daily crude oil output in three countries actually fell by slightly more than 1.8 million barrels. But, over the same 3-year period, insatiable world oil demands grew another 8.5 million barrels daily.

Because of declining output in Libya, the United States, and Venezuela, rising world oil demands could be sated only if other countries lifted their daily production rates by slightly more than 10 million barrels between 1970 and 1973. Because delays are unavoidable when crude oil output is to be boosted above previously planned levels, only Iran and Saudi Arabia, with their already known, huge, low-cost reserves, were in a position to expand production quickly enough to fill the gap. Thus, table 1 shows that between 1970 and 1973 Saudi Arabia provided nearly 50 percent of the necessary 8.5 million barrel rise in the non-Communist world's daily oil output and Iran added another 25 percent.

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[7] Adelman, pp. 182–91.

[8] These 12 countries accounted for 84 percent of the rise in the non-Communist crude oil output between 1967 and 1970. This means that several countries not listed also made significant contributions to growing world oil supplies.

TABLE 1.—CHANGES IN OUTPUT BY THE MAJOR OIL PRODUCING NATIONS

Nation	1967–70		1970–73	
	Absolute change (thousand barrels per day)	Percentage of total non-communist change [1]	Absolute change (thousand barrels per day)	Percentage of total non-Communist change [1]
Libya	1,641	19.7	−1,198	−14.2
Venezuela	148	1.8	−326	−3.9
United States	696	8.3	−318	−3.8
Saudi Arabia	840	10.1	4,170	49.3
Iran	1,157	13.9	2,108	24.9
Nigeria	681	8.2	1,053	12.4
Abu Dhabi	NA		657	7.8
Canada	315	3.8	521	6.2
Indonesia	355	4.3	463	5.5
Iraq	290	3.5	446	5.3
Kuwait	451	5.4	280	3.3
Algeria	168	2.0	86	1.0
Total non-Communist world	8,342	100.0	8,461	100.0

[1] Entries in this column do not sum to 100 percent because production by several small countries is excluded.

Sources: American Petroleum Institute, Petroleum Facts and Figures (Washington, D.C.: American Petroleum Institute, 971); Oil and Gas Journal, Dec. 28, 1970, and Feb. 25, 1974.

In sum, in the years immediately preceding 1970 many countries, including the United States, were competing to supply the non-Communist world's growing crude-oil demands. No country, or small group of countries, played a dominant role. In contrast, during the early 1970's only two countries—Iran and Saudi Arabia—supplied nearly three-fourths of the net additions to world oil demands. Given their dominant position as oil exporters, a decision by either of these countries to cut back production would have led to severe shortages in world oil markets. This dramatic change in the underlying economic structure of the world oil industry appreciably enhanced the monopoly power of Iran and Saudi Arabia and of OPEC—the organization that these two countries soon came to dominate. Various OPEC members chose to exercise their new power by threatening to embargo all sales unless their customers paid higher prices or acceded to certain well-known political demands. Because of Iran's and, especially, Saudi Arabia's ever-tightening control over incremental world oil supplies after 1970, these embargo threats increasingly became much more credible. As a result, oil consumers capitulated and world oil prices escalated.

III

A huge oil field was found at Prudhoe Bay on the Alaskan North Slope in 1967; subsequently significant oil and natural gas deposits were found in northwestern Canada. In 1970, the first of many large crude-oil discoveries was made in the North Sea; also the U.S. Government, after an 8-year hiatus, resumed large-scale sales of oil land leases on the outer continental shelf. Because the lag between discovery and initial production of oil from any of these sources is several years, none has yet to yield appreciable flows of crude-oil supplies. This state of affairs is about to change.

The North Sea will be the world's most important new oil theater over at least the next 10 years. Since the first North Sea oil was discovered less than 5 years ago, more than 30 commercial fields have been

found. At this writing, five have been designated "giants"—that is recoverable reserves exceeding 1 billion barrels—and no one now doubts that other fields will be honored with this designation before year end. Some idea of the magnitude of the recent North Sea oil play may be inferred from a comparison with discoveries in Texas where, over a period spanning more than 50 years, only four giant fields have been discovered.[9]

The first really large quantities of North Sea oil are scheduled to be shipped from Norway's Ekofisk field by spring 1975. Laying of the pipeline connecting Ekofisk with Teesside, England, has recently been completed; also the first development well from a permanent production platform is now in place. Ekofisk daily production is expected to rise gradually to 175,000 barrels in the first months of 1975 as additional development wells are completed. Daily production is scheduled to continue upward to 300,000 barrels by the end of 1975.

Commercial quantities of crude oil have already been found in six other distinct fields in the Ekofisk vicinity. Development of most of these fields is already well advanced. Production should begin coming on stream in 1976. With the addition of this oil, the pipeline connecting Ekofisk to Teesside should be shipping oil at its planned daily capacity of nearly 1 million barrels before 1980.

Large quantities of oil will also begin flowing in 1976 from several fields currently being developed in the British North Sea. The British Petroleum Co.'s exploration manager estimates that daily shipments from Britain's North Sea waters will reach 500,000 barrels by the end of 1976.[10] Daily shipments from just three British giants—Brent, Forties, and Ninian—should be about 1.5 million barrels in 1980.[11] At least another million barrels can be expected from other British fields already being developed. Moreover, now that oil companies are geared up for a major North Sea oil play, additional large quantities of oil can be expected to be on stream by 1980, both from fields just discovered within the last half-year and from fields that have yet to be discovered but probably will be before 1977. To summarize, if present development plans are merely carried out, daily crude-oil production from British and Norwegian North Sea waters will total at least 3.5 million barrels in 1980. However, if new exploration and development continues at its present high rate, daily 1980 output of as much as 5 million barrels of North Sea oil does not appear to be impossible.[12]

Alaska's huge Prudhoe Bay field has recoverable reserves of at least 9.6 billion barrels of crude oil.[13] This should yield a daily output of 2 million barrels when fully developed.[14] It was initially expected that delivery of Prudhoe Bay oil would begin in late 1972. However, because of delays resulting from environmental review procedures, construction of the pipeline necessary for delivering this oil

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[9] Texas currently produces more than 3.6 million barrels per day of crude oil.

[10] "U. K. May Be Oil-Sufficient by 1980's," *Oil and Gas Journal*, Nov. 19, 1973, p. 30.

[11] "North Sea Belt Adds to Its Growing List of Giants," *Oil and Gas Journal*, Feb. 11, 1974, pp. 17–19.

[12] "U. K. Oil Self-Sufficient by 1980's," p. 30. British Petroleum's exploration manager is reported to have said that daily North Sea performance will reach 2.2 million barrels in 1978 and could be about 4 million in the early 1980's, with nearly 3 million of this total coming from British waters. Production estimates by the major oil companies tend to be conservative.

[13] "Alyeska Backers Hunt for Way Round New Roadblock," *Oil and Gas Journal*, Feb. 19, 1973, p. 22.

[14] "Initial Alyeska Capacity to Double," *Oil and Gas Journal*, July 22, 1974, p. 30.

was not even authorized until late 1973. Work on the trans-Alaskan pipeline—TAPS—has finally begun. Its owners expect daily shipments of about 1.2 million barrels to begin in mid-1977; by 1980 these will probably be built up to around 2 million barrels.[15]

American oil companies began extensive offshore operations in the late 1940's. By 1972, oil companies had leased approximately 5 million acres of Federal lands on the Outer Continental Shelf—OCS. During 1973, about 1.5 million barrels of crude oil per day came from OCS sources.

Most currently produced offshore oil comes from Federal lands leased prior to 1962. The U.S. Government held no general offshore lease sales from 1962 to 1968. Two small Federal drainage sales were held in 1968 and 1969. Resumption of large offshore lease sales began in 1970 when 0.5 million acres were leased for $846 million. This was followed by four lease sales in 1972 and 1973 in which more than $5 billion was paid for rights to produce oil and natural gas from slightly more than 2 million acres. In 1974 there were three more lease sales. These netted roughly $5 billion in return for oil production rights to another 2 million acres. Because the time lag from lease sale to significant production is 4 to 6 years in OCS waters, the United States has not yet received significant quantities of oil from these recently leased offshore waters. Oil companies will not say how much oil they expect to find there. However, at least 1 million barrels per day of crude oil will have to be on stream before 1980 if they are to recoup their mammoth $10 billion post-1970 OCS leasing investments.

In early 1974 the White House announced that annual lease of OCS lands would be stepped up to 10 million acres beginning in 1975. If this accelerated leasing schedule is adhered to and if these lands prove to have only a small fraction of the oil reserves expected to be found on the offshore lands recently leased, U.S. offshore production should continue to rise rapidly throughout the 1980's.

In sum, the consummation of exploration and development plans already well underway virtually guarantees that additions to new oil supplies from the North Sea, northern Alaska, and the U.S. Outer Continental Shelf will total at least 6 million barrels daily by 1980. Assuming that non-Communist oil demands continue to grow at the 5 percent average annual rate that has held from 1970 through mid-1974 and that, because of the recent sharp rise in oil prices, the trend to falling U.S. onshore output is arrested, at least 40 percent of the additional 16 million barrels per day that will be demanded by 1980 will come from these new politically secure North American and Western European sources.[16] If, as most oil industry observers now predict, the recent rise in crude-oil prices causes non-Communist oil consumption to grow at a much slower rate over the next few years, then new North American and European sources will be able to supply far more than 40 percent of the world's growing oil demands. In other words, by the end of this decade world oil markets will have undergone a second dramatic change: a small collection of industrialized Western countries

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[15] Ibid.

[16] Adelman et al., p. 28. Energy supply forecasts summarized this study are consistent with the assumption that the recent trend to falling U.S. onshore crude-oil output will be arrested (and may rise) if the price of newly developed U.S. crude stays near $10 per barrel.

will actually be competing with Iran and Saudi Arabia to satisfy the world's growing oil demands.

IV

As American and Western European oil production soon begins its inexorable rise, world oil markets will witness another major structural change. What will this mean for OPEC? Or for the industrialized oil consuming nations? The two scenarios outlined below are intended to bound the range of possible conditions in world oil markets during the late 1970's.

Throughout the 1960's, oil was cheaper than most other fuels. At present world prices this is no longer true. Oil is now slightly more expensive than both coal and nuclear power. Also, at these prices, oil production from North America's huge reserves of tar sands and oil shale may now be commercially viable. Slightly higher prices will make the production of synthetic oil from coal profitable. In sum, given both time and the persistence of present or just slightly higher real prices on world markets, OPEC oil has many politically secure substitutes. Repetitions of recent embargo tactics will guarantee that the major oil consuming countries will develop these substitutes and take steps—that is, import quotas, higher excise taxes on petroleum products, et cetera—to eventually reduce sharply their consumption of OPEC oil. Having already achieved both high prices and vast political power, it would be foolish for OPEC to provoke such a response. Thus, even if OPEC retains all of its present monopoly power, it appears unlikely that its members would take measures causing world oil prices to rise much above current real levels.

At the other extreme from maintaining something like the present very lucrative status quo, it is possible that each OPEC member's desire to raise its share of the total oil profits will cause competition for increased sales to break out and, as a corollary, world oil prices to tumble. Assuming a total breakdown of the OPEC cartel, oil prices at the Persian Gulf could actually fall far below 1970 levels.

Neither of the boundary possibilities just discussed is likely. On the one hand, because of accelerating oil supplies from Western Europe, Northern Alaska, and the U.S. offshore, the rate of growth in demand for OPEC oil should soon begin to fall off sharply. As the decade progresses, OPEC members will have to cut back production from presently planned levels if they are to prevent a real price fall. Cartels usually find that it is difficult both to get and to enforce agreements aimed at cutting back production from planned levels. On the other hand, Saudi Arabia and, to a lesser extent, Iran will continue to be OPEC's dominant members throughout this decade. Their market shares are now big enough that either can always retard or even halt falling world oil prices by unilaterally cutting back its exports.[17] If oil prices begin falling too quickly it will be in their interest to do so in order to prevent an even costlier outcome—OPEC's disintegration.

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[17] After the 1973 OAPEC embargo, many countries and oil companies entered into new long-term supply contracts with OPEC members. Recent experience suggests that these will be lived up to only if future oil prices fall or remain stable. If prices rise, these contracts will be renegotiated according to OPEC's terms. Thus, long-term contracts with OPEC members are at best unnecessary. More likely, by making future prices sticky, they will buttress OPEC's efforts to counteract the inexorably rising pressures for lower world oil prices.

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Because of the large and politically secure new oil supplies that are just now starting to come on stream, it is likely that OPEC's monopoly power has already reached its zenith and will soon begin to ebb. However, because only two Persian Gulf countries—Iran and Saudi Arabi—must remain very large oil suppliers at least through the mid-1980's, total dissolution of the OPEC cartel is most unlikely. Hence, though they shall probably soon begin to fall from present, in deflated dollars, levels, world oil prices are likely to remain many times higher than the Persian Gulf's low production costs. Given this prognosis for OPEC's future, there is reason for suspecting that a national commitment to achieving Project Independence may not be wise.

Project Independence is the administration's plan to undertake a massive program of domestic energy development so that the United States can become virtually energy self-sufficient in the 1980's. The benefit from such a policy is obvious—eliminating all nonmilitary foreign threats to the security of U.S. energy supplies. Unfortunately, its economic and environmental costs are likely to be very high.

The United States can have energy independence only by rapidly accelerating development of all currently feasible domestic energy supplies—the new relatively low-cost supplies from northern Alaska and the Outer continental Shelf will not be nearly enough. Sharply higher production of onshore crude oil, coal, and nuclear power will also be necessary, as will the first large-scale production of synthetic petroleum products from both coal and oil shale. Increased energy supplies from these other sources are competitive with foreign crude only as long as it sells for near its present high price. If the United States adopts Project Independence and world oil prices do fall, we will be saddled with the world's highest energy costs. Even worse, the increased production of coal and oil shale will cause much more pollution of our air, land, and water, and greater reliance on nuclear power will raise the likelihood of a disaster due to either accident or nuclear theft.[18] Given OPEC's likely near-term future, the expected gains from a strong commitment to Project Independence would appear to be heavily outweighed by these likely costs.

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[18] These environmental and safety hazards are discussed in detail in the final report of the Ford Foundation's $3 million Energy Policy Project (see *A Time to Choose: America's Energy Future* [Cambridge, Mass.: Ballinger Publishing Co., 1974]).

End of an Era

The agreement currently being negotiated for a 100 percent takeover of Aramco by Saudi Arabia, which will no doubt be extended to some other exporting countries, has sounded the death knell of concessions in anything like their original form.

This development is the climax to a long process of evolution which began almost as soon as the original concessions were granted—or at least as soon as oil had been found in significant quantities. In various ways, with individual countries acting as a pacemaker for others from time to time, the exporters sought to limit the power which the early concessions bestowed on the major companies; namely, control over the amount of oil produced and the price at which it was sold. The governments had two main goals—higher revenues and direct participation in the industry—although these were not always compatible.

THREE METHODS

The achievement of these aims has taken three distinct forms. Some concessions were abruptly terminated by nationalization, state companies taking over oil operations either on an exclusive or nonexclusive basis allowing for partnership by private companies. Other concessions with the major companies were renegotiated, during which time normal operations and even expansion programs were usually allowed to continue unimpeded. And third, from the late 1950's onward, new types of agreement were pioneered with newcomers to the international scene which broke away from the traditional form of concessions.

The main features of the concessions granted prior to the Second World War were the large areas involved, often the entire area of a country, and their long duration, usually from 60 to 75 years. But an important concept written into a few concessions—notably those in Iraq and Saudi Arabia—was the gradual relinquishment of unexploited territory. It was with these areas—some of which had a proven oil-bearing potential—that the exporting countries were able to experiment with new types of agreement. Relinquishment was a subject of continual dispute in Iraq and was partly responsible for the eventual nationalization of IPC. But in Saudi Arabia, in 1948, Aramco agreed a program of relinquishment which by 1963 had reduced its area by about three-quarters, while further relinquishments would have reduced it to less than 4 percent of the original by the time the concession expired at the end of the century.

This principle of relinquishment was gradually extended to cover the early concessions in other countries and was incorporated in all the new ones. A typical example is the Libyan Petroleum Law of 1955,

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Source: *Petroleum Economist*, January 1975: pp. 21–25.

as amended in 1961, which required progessive reduction of a concession area to 75 percent of the original area within five years, to 50 percent within 8 years, and to one-third or one-quarter within 10 years.

Another feature of the post-1950 concessions was the reduction of their duration to about 30 to 40 years, based on the adoption by Venezuela in 1943 of a system for granting short-term licences for prospecting over a limited period, which could be followed by exploitation licences not exceeding 40 years.

The various paths taken by the governments have converged within the Organization of Petroleum Exporting Countries which, in October 1973, took upon itself the right to determine crude oil prices, and since then, in a series of spectacular price increases, has raised per-barrel revenues some fivefold. As a result of the 1973 Arab-Israeli war, the Arab states which were most closely linked to the last vestiges of the concession system exercised production controls for the first time, initially on political grounds but more recently as a means of maintaining high prices. The complete state take-overs now in prospect will only confirm the overall control of production and pricing which the exporting countries have already achieved over the past year or so.

Within the ranks of OPEC are many different types of government-company agreement, reflecting different conditions and needs. Some are still called concessions, in the sense that they confer certain rights and privileges in return for specific considerations such as investment, financial rewards, and work agreements, although the word does not carry its original meaning. Broadly speaking—and excluding Gabon which is an associate member—five of the full members of OPEC—Algeria, Indonesia, Iran, Iraq and Libya—operate industries which they have wholly or partially nationalized; five operate under participation arrangements with the major companies, Abu Dhabi, Kuwait, Nigeria, Qatar and Saudi Arabia; Ecuador has an option to participate, although the terms have not yet been finalized; while Venezuela, which has already taken the right to set its own prices and production rates, has decided on a program of early nationalization, although the main concessions are due to expire anyway by 1983.

OPEC OIL

In most of these countries, more than one type of agreement is in operation. The Iranian state company, for instance, manages the former consortium area of the majors, but is also in partnership elsewhere, primarily offshore in the gulf, with other smaller companies. Also, it is unlikely that all will insist on a 100-percent state ownership along the Saudi lines. There are, of course, smaller oil exporters who are not members of OPEC. Some, such as Trinidad and Malaysia, have applied for membership while others like Dubai, Oman and Bahrain have not, although the latter two have adopted most of the OPEC forms of agreement such as participation. At present, OPEC members account for about 56 percent of world oil production and over 90 percent of the world trade in oil; and it was by banding together into a tight cartel that the exporters achieved their dominant position.

Attempts at nationalization over the years were generally not successful unless and until agreement was reached with the concessionary companies to bring the state's activities within the framework of the existing world system. This was due not only to the oil companies' control of world markets but also to the lack of technical and managerial expertise in the exporting countries. Without such agreement, the state-operated industries invariably declined.

NATIONALIZATION

In some instances, state companies were formed to take over internal refining and distribution of products, a function traditionally performed by the concessionaires. Together with the training programs instituted by the concessionaires, this was a useful means of obtaining experience before embarking on more ambitious ventures. This was the case in Iraq, for instance, where the government oil refining administration was set up in 1952, and it was not until 1964 that the separate Iraqi National Oil Co. was formed to operate in all phases of the industry, including sales overseas later taking over exploration and production under a progressive program of nationalization. However, until an agreement including compensation was reached with the majors in 1973, disputes in Iraq caused the oil industry to stagnate. This was generally the experience in other countries as well. It was intended that the National Iranian Oil Co.—the first state company of current OPEC members to be established when in 1951 Iran was the first to nationalize its industry—should take over international operations from its concessionaire. But its activities were confined to internal distribution until Iran was compelled to make a compromise agreement with the major companies in 1954, and even then it was not until 1973, in return for a long-term supply agreement with the majors, that the state's takeover finally became a reality.

Similar examples among non-OPEC producers include Mexico and Egypt. Petróleos Mexicanos was formed in 1938 to operate a nationalized oil industry, but could barely produce enough oil for internal consumption. Only recently, based on the potential of new discoveries, has Mexico shown the possibility of becoming an exporter once again. The Egyptian General Petroleum Co., established in 1956 to take over from the concessionaires when they withdrew in the face of demands for a 5-per cent Egyptian shareholding, did seek help from foreign companies, including U.S. independents and Russian state concerns. A few successes were achieved, but it is only with the return of the majors since the beginning of 1973 to undertake a large-scale exploration drive that Egypt has a real hope of becoming a net exporter.

In view of the change in the oil industry from a buyers to a sellers market, the terms of these new agreements are much more favorable to the exporting countries than under the original concessions. Also, in more recent instances of nationalization, such as Algeria and Libya in 1971, governments were able to reach a settlement with the former concessionaires much more quickly than in the past. One of the most successful agreements following nationalization was reached in Indonesia which in 1966 pioneered the system of production-sharing. Prior to that, after the industry was nationalized in 1960, concessions were replaced by work contracts under which the majors continued to op-

erate on behalf of the state company.[1] The contract system was a subject of continual disagreement, but the production-sharing concept developed from it met the requirements of the companies and still placated national pride in that overall management remained in the hands of Pertamina, the state company. The companies are entitled to take up to 40 percent a year of the crude oil produced in order to recover their exploration and production costs, while the remainder is shared on a sliding scale from 65 to 70 percent in favor of the state company. This system has since been extended to other countries and is the basis for Egypt's new agreements with the majors.

NEW CONCEPTS

Apart from nationalization, the first real breakaway from the traditional form of concessions occurred in the late 1950's as a result of the expansion overseas of smaller U.S. independent and some European state-owned companies. In order to compete with the established concessionaires, the newcomers had to offer better terms, particularly in the provision of wider government participation. This met one of the aims of the governments, who had territory relinquished from the old concessions with which to bargain. But the resulting oversupply of oil—when the newcomers had to market their discoveries in order to recoup their investment—led to price-cutting and an overall reduction in government per-barrel revenues.

The first joint-venture partnerships were pioneered by the Italian state oil concern ENI, which in 1957 finalized agreements with the state companies in Egypt and Iran. ENI had to bear all the exploration costs if no discovery was made, but if it was, the government would put up half the capital and take half the oil produced. Since the government charged tax on the half-share owned by the foreign company, the arrangement was described as 75–25 profit sharing, in contrast to the 50–50 formula that had become general since 1950. But the higher share of the profit was secured only because the government had bought its way into the company.

This formula was applied in a series of similar partnerships over the following decade. The agreements varied in detail; for instance, equity Government participation was provided for in those signed by a Japanese consortium in 1957 and 1958 with Saudi Arabia and Kuwait for offshore rights in the neutral zone, and the Kuwait-Shell offshore agreement of 1961 gave the government the right to purchase 20 percent of the producing company if oil was discovered. The concept of Government participation in integrated operations including refining, transportation and marketing as well as production, was introduced in an agreement concluded in 1965 between Saudi Arabia and Auxirap, a subsidiary of the French state-owned ERAP.

In 1966, ERAP was again involved in a radical new departure from the established pattern in an agreement with Iran based essentially on the service contract idea, in which the foreign company undertook exploration and production on behalf of the state concern in return for no more than a long-term right to purchase a certain percentage

[1] A similar method had long before been adopted in Argentina, where one of the first state oil companies in the world was originally formed in 1907, but that country has never figured as a net exporter.

of supplies at a discounted price. This concept was first formulated by Venezuela in 1959 but was not implemented there until 1970. ERAP's agreement with Iran was followed by a similar one with Iraq in 1968 and the principle has since been extended elsewhere. But the real breakthrough came in 1973 when a service contract was agreed by the major consortium companies in Iran, who are "paid" for their operations by a long-term sales guarantee, although without any discount.

EVOLUTION OF CONCESSIONS

While partnership agreements and state-run operations gave the exporting countries the desired stake in their industries, the results of the exploration that followed were not always successful and world oil exports remained largely in the hands of the major companies. (Their share of crude oil production fell from about 96 percent in 1952 to about 82 percent by 1965.) The most consistent revenue increases have been achieved by those countries which have been able to improve the terms of concessions by negotiation rather than cancelling them by nationalization. Revenues under the concessionary system have been increased in two ways—through profit-sharing and participation.

A form of profit-sharing was envisaged in the original Iranian and Iraqi concessions, but was subsequently abandoned in favor of fixed royalties which until 1950 remained the principal method of payment by a concessionaire. An exception was Venezuela, which in 1943 began to levy income tax in addition to royalties, while only two concessions in the Middle East—Kuwait's agreement with Aminoil in 1948 and Saudia Arabia's with Pacific Western—later Getty—in 1949, both in the neutral zone—made provision for the companies to pay a share of any profits to the state.

Beginning with Venezuela in 1948 and Saudi Arabia in 1950, the concept of 50–50 profit-sharing became generally accepted, the Government's share embracing royalty—generally 12½ percent at that time—and income tax. As shown earlier, this concept was broken under some of the new agreements, but as far as the major concessionaires were concerned it remained fairly static until around 1965 when "profits" began to be calculated after the deduction of royalties. This gradually led to a ratio of about 58–42 in favor of the Government.

But in fact, the company's share was increasingly a national profit since income tax was computed on the basis of posted prices regardless of the prices actually received. When realized prices fell during the oversupply situation of the early 1960's, the actual division of profits was more like 70–30 in favor of the Government. Other factors, such as freight and sulfur premiums, also eroded the so-called 50–50 principle. The Government's share has soared even higher in recent months with increases in royalties and taxes, which now stand at 20 percent and 85 percent respectively in some countries. Meanwhile, total Government revenues have been increased dramatically due to the higher posted prices enforced by OPEC since October 1973. In addition, a rising proportion of Government take has resulted from state participation in the concessionary companies.

PARTICIPATION

To a modest degree, some of the early concessions allowed for government participation, both in management and in oil exploitation. IPC's 1925 concession in Iraq, for instance, gave the Government the right to appoint a director to the board of the company and provided for a 20 percent participation of Iraqi capital in any new share issue. D'Arcy's original concession in Persia provided for the Government to purchase shares in the operating company when it was formed, and this applied also in the Kuwait-Aminoil concession of 1948 in the neutral zone. In more recent agreements, beginning with that between Saudi Arabia and a Japanese consortium—later Arabian oil—in 1957, the option for equity participation was no longer dependent on any public offering of shares but was conditional upon the discovery of oil. The first major company to agree this was Shell in its 1961 offshore Kuwait concession.

The next step was for the Government to take a share of the oil produced, as distinct from an optional shareholding. As far back as the Mosul and Basrah concessions signed between Iraq and IPC in 1932 and 1938, provision was made for up to 20 percent of production at the wellhead to be made available to the Government at cost, but this was for internal consumption only and was not to be exported. When the profit-sharing principle was instituted in 1950, governments had the option to take royalties in oil instead of in cash. Some attempts were made by state companies to market this oil internationally, but since market prices were weak it was generally much more profitable to let the companies sell it. This also applied under most of the partnership agreements, and by and large, the activities of the state concerns were confined to internal refining and distribution. They recognized, increasingly, that the only way they could enter the international market to a significant degree was through some form of participation with the major concessionaires.

The climax to demands for participation came with the agreement of 1st January 1973 under which three countries—Saudi Arabia, Abu Dhabi and Qatar—purchased, at a bargain price, a 25 percent share of the concessionary companies, to be increased to 51 percent in 1983. This gave the state companies title to one-quarter of the oil produced, but because they were still not in a position to market it internationally provision was made for them to sell a large part of it back to the companies, at a price somewhere between the tax-paid cost and the posted price.

Since then, state participation has been raised to 60 percent in some Gulf countries (Saudi Arabia, Kuwait, Abu Dhabi, Qatar, Oman and Bahrain), and to 55 percent in Nigeria. In view of the change from a supply surplus to shortages, to some extent created artificially by the Arab production cutbacks, and the resulting success of the state companies in selling their own oil they were able to raise the price of the larger amounts of buy-back to between 93 and 94.8 percent of posted prices. Earlier last year, due to OPEC's increases in posted prices, this gave the companies an advantage of around $4 a barrel between their 40 percent tax-paid cost "equity" oil and buy-back oil which was around the same price as the state's own sales. The recent moves

by Saudi Arabia and others in raising royalty and income tax were largely to reduce even eliminate this advantage. Thus concessions have finally evolved to the point where, for the concessionary companies, there is little point in remaining as investors, producers and exporters of oil.

THE FUTURE

Whatever criticism may have been levelled against concessions, they did serve their purpose and benefited the exporting countries, the companies and consumers. It is doubtful whether any other kind of arrangement could have provided the incentive for exploration in non-proven areas. This is well recognized today, of course, when governments offer favourable terms for the companies to explore new areas, such as the North Sea. Only after oil has been discovered do governments generally demand participation and a bigger share of profits.

It is not yet clear what new pattern will emerge within OPEC if and when governments take over entirely from the concessionaires. The state companies will undoubtedly want to expand into downstream operations, but the bulk of the free world's transportaion, refining and distribution facilities will remain in the hands of the major companies. As buyers of crude from the state companies, they will undergo a period of readjustment which will be more difficult for some than others. Eventually, the consumer may well benefit from lower prices, as the state sellers find themselves in competition with one another. What is certain, if exploration and development is to continue, is that the skills of the companies will be needed just as much as ever—and probably more so with the increasingly sophisticated technology required to operate in more difficult environments, such as the deeper waters offshore.

OPEC Is Starting To Feel the Pressure

(By Louis Kraar)

A year and a half ago, a group of underdeveloped nations carried off a revolution that will surely rank as one of the epochal events of the 20th century. In a matter of months, the Organization of the Petroleum Exporting Countries achieved the most radical transfer of economic and political power ever to occur without war. All of a sudden, the mighty economies of the United States, Western Europe, and Japan seemed to be at the mercy of this seemingly invincible cartel, whose decisions could affect everyone who drove a car, heated a home, or fueled a factory. Befitting their new international status, OPEC's representatives sat down in Paris last month with delegates of the leading industrial nations to bargain as equals about the future of the world's energy supplies.

The revolution has happened, and it will not be repealed. But it is time to take a more realistic, less panicky, look at where it will lead. The fact is that OPEC's incredible success and aura of omnipotence hide an inherent instability. Looked at coolly, the organization is a loose, casually managed coalition of disparate nations scattered over three continents and a large island archipelago (Indonesia). The 13 members share a sense of injury from what they regard as past exploitation, but they have little else in common. Practically the only action they ever fully agree upon is raising the price of crude oil. And even in doing that they act haphazardly, amid a clash of fundamentally differing national goals. The largest producer, Saudi Arabia, cannot sensibly spend all its money and usually argues for lower prices, while the second largest, Iran, has a virtually insatiable appetite for more revenues.

During the past few months, OPEC has been undergoing a severe test of its cohesion and strength. In fact, there are now signs of stress that could crack the cartel within the next several years. Some members have already started shaving prices slightly by stretching out credit terms. The cartel may remain powerful for some time, but its long-term prospects are no better than those of the old Standard Oil trust in the late 1800's.

A POTENTIALLY LETHAL DEFICIENCY

OPEC is struggling mainly to preserve its spectacular recent gains. The lightning escalation of petroleum prices—climbing more than fivefold in the past year and a half—has deepened economic recession in every industrial state. The recession, in turn, has helped cause the first drop in consumer demand for oil. By late summer, OPEC members all together are expected to be pumping only about 25 million

Source: *Fortune*, May 1975.

barrels daily—25 percent less than before the 1973 Arab boycott and nearly 40 percent below their total capacity. The organization has frozen prices until September, and is busily trying to keep its members in line.

Though widely considered the most effective cartel in modern times, OPEC has a nagging deficiency that could prove lethal during a period of slack demand for its oil. The group has never been able to agree on and stick to a formal program for sharing production among nations whose individual goals have proved almost impossible to reconcile. Inside the organization's closed councils, the members have been discussing a "contingency plan" to set output quotas for each country. But the mere notion of production quotas sharply divides them.

The danger of the cartel's collapsing haunts private meetings of the OPEC Economic Commission, a planning body that periodically draws together senior officials from member nations. The Commission's own minutes, which Fortune obtained, reveal the depth of concern.

During a meeting in September to discuss quotes, the minutes report, most members expressed fear of "a dangerous race of price cuts as energy producer tries to maintain his share in a limited market." But Indonesia and Nigeria representatives asked that their countries be excused from any cutbacks because they desperately need the money to finance development. Being poor nations with large populations, they want to squeeze all the money they can out of their relatively small crude reserves, and squeeze it as fast as they can. Saudi Arabia objected to the group's even discussing the idea of determining its output. Though the wealthy Saudis could afford considerable cuts in production, they believe that they must retain exclusive control of their own vast reserves to achieve their political goals in the Middle East.

Lacking a formal scheme for sharing cutbacks, OPEC has improvised a temporary means to prevent its self-destruction. In effect, the group is letting the major oil companies allocate the reductions among the producing countries. No collusion appears to be taking place between OPEC and the corporations, and none is necessary. The companies want to protect their future access to crude in all the countries, so they try to spread their purchases among the producers as equitably as possible. OPEC has taken several steps to make it easier for the corporations to follow this policy and thus to support the cartel. For one thing, Saudi Arabia and Iran, which used to pressure the companies to take more and more of their nations' crude, have discontinued this kind of pressure. The cartel members have also eliminated price differentials that used to make one country's oil economically more attractive than another's.

For example, early this year, Abu Dhabi and several other members lost sales in the soft market because they charged high prices for crudes that were low in sulfur content or close to markets in Europe. To put each member on a more equal competitive basis, OPEC quietly decided that the price differentials should be substantially reduced or eliminated. As a result, Saudi Arabia and Iran are now permitting their production to be cut back, and several smaller producers are regaining some of the market they had lost because of premium prices.

THE SPECTER OF GLUT

The system of maneuvering the oil companies into allocating cutbacks has not solved OPEC's problems, but has merely postponed the crisis. If consumer demand fails to pick up this fall, several producing countries that are desperate for more money could well start pressing the companies to take more of their petroleum. Algeria and Iraq, among others, are eager to increase their production and are likely to cheat a bit on prices. And within several years, OPEC market may shrink even more than it has so far, while its total producing capacity will probably continue to expand. The present high prices are encouraging the development of oil in areas outside the cartel's control and are bound to stimulate a search for alternative forms of energy.

A pentrating assessment of the cartel's troubles was offered recently by Iran's Interior Minister, Jamshid Amouzegar, a courtly U.S.-educated engineer who is OPEC's most candid spokesman. If the glut of oil grows, he said, the producers will be confronted by "a whole new situation . . . Then there would have to be agreement on sharing cutbacks among our members, or OPEC would be shattered."

ABSOLUTE MONARCHS WITH CONVERGING INTERESTS

To fully appreciate OPEC's weaknesses, it helps to re-examine how the cartel originally engineered its price revolution. Rather than following a grand design, OPEC first seized complete control over pricing by clever improvisation and fortuitous timing. Only an extraordinary confluence of economic and political conditions enabled the producers to attain such enormous power. Their success, Amouzegar admits, "was not a matter of careful calculation, but more of chance." Indeed, no one was more surprised than the OPEC members themselves when their collective moves worked so well.

For years the two largest producers had been fundamentally at odds with each other. The Shah of Iran urgently sought a huge increase in prices in order to finance the creation of a well-armed industrial state. But Saudi Arabia's King Faisal feared his rival's drive for power across the Persian Gulf. Less ambitious and more cautious than the Shah, he acted within the cartel as a force for price restraint. Then, in the autumn of 1973, the interests of the two absolute monarchs converged as the Arab-Israeli war erupted.

As leader of the Moslem world, Faisal was not only passionately desirous of seeing Jerusalem freed from Israeli rule, but fearful that his failure to exert influence would allow radical Arab States to dominate the region, and perhaps subvert his kingdom. Before the war, he had tried to persuade the United States to tone down its support of Israel. In the summer of 1973 he warned oil-company executives that if America failed to heed his urgings, "you will lose everything." Finally, he decided that his only choice was to cut off oil production. In tightening the supply, the Saudi king created an opportunity for the Shah, whose oil reserves seemed likely to peak out within a couple of decades. Shahanshah Mohammad Reza Pahlavi now had a chance to reap the wealth of his dreams.

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Meanwhile, circumstances in the consumer countries also happened to be ideal for the OPEC revolution. For the first time in recent history, all the industrial nations were on a simultaneous economic upswing. Their expansion outpaced available energy supplies, and the international oil companies had no spare capacity outside the Middle East. Inflation rapidly mounted; a wave of labor strikes swept Western Europe.

By an uncanny coincidence, the government in every major industrial state was weak and preoccupied with survival. The Watergate crisis, of course, absorbed the attention of American leaders. Britain's Conservative regime had suffered two by-election defeats. French President Georges Pompidou struggled with the illness that would soon claim his life. Japanese Prime Minister Kakuei Tanaka fought sagging confidence in his leadership.

Tipped off by the Saudis in advance, the oil companies warned Washington of the impending embargo. On October 12, 5 days before the boycott, the chairmen of Exxon, Texaco, Mobil, and Standard Oil of California sent a memo to the White House advising that "a major petroleum supply crisis—was likely—in the event of further evidence of increased U.S. support of the Israeli position." But Washington apparently did little to attempt to avert the boycott. Instead, Nixon angered the Saudis by announcing that he was resupplying Israel with military equipment to replace its war losses.

Knowing that the Arab boycott was coming, the producer countries hurriedly met in Kuwait and proclaimed their first unilateral price increase, an unprecedented rise of 70 percent. "From that time," says Amouzegar, "the oil companies lost the power to determine price, either by themselves or through negotiations."

The OPEC members were absolutely amazed by the feeble response from the consuming nations. Though the Arab "oil weapon" proved relatively ineffective in actually curtailing supply, it created a psychology of shortage. In the scramble to obtain an adequate flow of petroleum, no Western nation so much as officially protested the producing countries' assertion of the power to set prices by fiat. "They got away with it," says the chief executive of one oil company, "because the day of gunboat diplomacy is gone."

HOW THE CARTEL REALLY WORKS

Since the successful revolution, tensions within OPEC have persisted, but each of the most active members brings qualities to the organization that have helped it survive. The strategic vision and ambition come mostly from the Shah of Iran. Venezuela contributes the largest cadre of trained technocrats, who have long pondered ways to wring higher profits from their own nation's dwindling reserves. And the self-righteous rhetoric is supplied mainly by Algeria and Libya, who like to depict OPEC as the vanguard of the Third World's movement toward "a new economic order."

Politics, not economics, dominates the organization's decisionmaking. In fact, no thorough economic analysis has undergirded any of OPEC's daring moves. Neither the organization nor its members are equipped to perform sophisticated economic studies. But, as Amouzegar notes, "This sort of analysis isn't necessary." Instead, the respec-

tive government ministers dicker among themselves to set prices. They differ not only in their national goals, but in their perceptions of what consumer nations will tolerate. Sometimes bitter arguments break out, but more often the members bargain like rug merchants in the outdoor bazaars of the East.

According to the organization's rules, OPEC can act only when there is unanimous agreement. But the members cannot agree unanimously even on such matters as the selection of a secretary-general to head the professional staff. To prevent paralysis, the group inevitably compromises. Although the secretary-general is supposed to serve for 3 years, the members decided that a mere majority could elect a man to fill the post, provided he served for only 2 years.

Compromises on other issues do not come quite so easily. The members differ on prices and practically everything else. The radical Libyans, for example, ordinarily avoid speaking directly to the conservative Saudis in OPEC meetings. Even for those members who are on speaking terms, there is no common language. Interpreters must simultaneously translate discussions into Arabic, French, Spanish, and English. Representatives generally avoid taking votes by talking and talking, until a consensus can be reached.

The dynamics of conflict and compromise dramatically unfolded at OPEC's meeting of December 1973, barely 2 months after the group had hiked prices by 70 percent. The Iranians sensed that the group could practically set prices at will, and the other members came to Tehram to plot the next action. Iran and the ideologically militant producers, Libya and Algeria, wanted to push prices as high as possible. But the Saudis felt that ramming through another big increase would debase the political message they had hoped to communicate by the embargo. And several smaller sheikdoms nervously worried that going too far might provoke an American military response.

While the Shah wanted money, he also wanted to keep the cartel together. Ultimately, he proposed a compromise midway between the low Saudi proposal and the higest level of the radicals. That raised prices 130 percent. The Shah rationalized the compromise by saying the new price was equivalent to the cost of alternative sources of energy, an explanation that OPEC simply adopted. "This was based on some very rough calculations," admits Amouzegar. "That's how it all started."

A POLICY OF DECEPTION

The almost relentless rise of prices since then has been executed through similar political processes. For instance, last summer in Quito, Saudi Arabia's Petroleum Minister, Ahmed Zaki Yamani, tried to stave off another price increase by threatening to put an additional 3 million barrels a day on the market. But Iran, Venezuela, and other producers countered by proclaiming that they would cut back their collective production by an equal amount. The tough talk brought yet another compromise, a modest price increase.

During the past year, OPEC has been cleverly deceptive. Instead of proclaiming across-the-board price increases, the group gradually ratcheted prices up nearly 50 percent last year by raising taxes and royalties. The tactics were sometimes so sneaky that the members could publicly claim that the increases were really decreases.

The cartel painstakingly works up elaborate public justifications for higher prices, but only after its decisions are made. Composing words to fit the music is a task for the OPEC Secretariat in Vienna. The Secretariat's headquarters reflects little of the new opulence of the member nations. It occupies two floors of an ordinary downtown office building most prominently marked by a sign for Texaco, which is also located there. OPEC has a professional staff of 30, including just 7 economists, drawn from the member countries. They work in austere offices with drag furniture and wall adorned by a few glossy photographs of oil fields. Their budget this year is only $4.5 million.

CAN MADISON AVENUE HELP?

Talking with Secretariat officials is like viewing the industrial world through the wrong end of a telescope. As an article of faith, they maintain that oil prices are not really high, but simply have been adjusted from artifically low levels. "There's a new reality," asserts one senior official, "and Americans have got to accept that they cannot continue the same lifestyle in the future." The case is argued with earnest and passionate rhetoric, but few current facts and figures. The economists are still busily assembling data to support their arguments.

OPEC is anxiously looking for ways to counteract its widespread image in the West as an evil, disruptive cartel. Its officials even resent the fact that the organization is called a cartel. They have seriously discussed engaging a Madison Avenue agency to help spread a more benign view. As a first step, OPEC has bought space in newspapers, including the New York Times and the Washington Post, to run the full communiques issued by its ministers. "Those American cartoons of sheiks sitting on the sand counting their money are racists," argues one petroleum minister. "We do not want to be taken as fools and stupid people, but this is the publicity we get."

To brush up OPEC's brief, the organization has installed as its secretary general a calm, diplomatic Nigerian engineer. Chief Meshach Otokiti Feyide took over in January from an Algerian, Dr. Abderrahman Khene, who personified his Government's polemical style and socialist politics. The title "chief" was bestowed upon Feyide by his tribe, the Obanla, but his resemblance to the stereotyped African ends there. He took a postgraduate degree at London University's Imperial College of Science and Technology and worked in Nigeria's oil ministry.

As OPEC's official envoy, Feyide travels around Vienna in a chauffeured white Mercedes limousine, and the Austrian Government grants him such diplomatic privileges as tax exemption and the right to use codes for communications. The Secretariat was originally stationed in Geneva, but left in 1965, largely because the Swiss refused to endow OPEC's officials with diplomatic prerogatives.

Over tea in his Vienna office, Feyide is delighted to tell a visitor how OPEC determines prices. "Our people don't just wake up in the morning and say that prices should be this or that," he says. "We do try to make decisions on an economic basis." But thus far, he acknowledges, OPEC economists supply oil ministers with only very rough calculations of market conditions for use in pricing. To provide better guidance for future decisions, the Secretariat has hired Western consultants because we want the facts.

Feyide also needs facts to justify the cartel's actions when they are under strong attack from consuming nations. He acknowledges that producers and consumers may disagree in their conclusions. "Of course, it is the interpretations—what people do with facts and how they use them—that will be different," he declares.

The secretary general pauses to sip his tea, and continues in a cultured British accent: "In absolute terms, yes, prices are rising. But we are just correcting for our loss of purchasing power." Feyide cites an example he uses to explain OPEC to his own children: "Suppose in 1971 it cost the price of one barrel of oil for the train fare from Lagos to Kano. But the next year, the train fare goes up 50 percent. Then I must get that much more for my oil. It's that simple."

Of course it isn't that simple, but Feyide's mode of thinking is understandable, given OPEC's origins. Even today, officials in the Secretariat invariably begin conversations by citing the "challenge" that initially united the producing nations: two unilateral reductions in the posted price of oil, announced by the companies in 1959 and 1960. For a decade the organization accomplished little because petroleum was abundant and the members could never agree on production controls. Says Mahjoob Ahmed Hassanain, a Saudi who is director of the OPEC Economics Division: "All through the sixties, crude oil prices remained at a standstill, while the prices of all manufactured goods were increasing."

TELLING THE CONSULTANTS WHAT TO SAY

Hassanain's argument has some validity, but since that period the cartel has far more than made good any loss of purchasing power. From 1955 through 1974, the income of producer governments from a barrel of oil increased nearly tenfold, while the prices of all goods in world trade roughly doubled. Though Hassanain received his Ph. D. at the University of Pittsburgh and most of his colleagues studied in America, they mistrust Western data on the value of petroleum. OPEC officials contend that in the past year inflation and the declining value of the dollar have cut the producers' purchasing power by about 30 percent. The Secretariat is trying to compile an index to prove its point.

OPEC has committed more than $2 million for outside economic analyses. It does not hesitate to tell its consultants the conclusions it wants. The Secretariat, for instance, assigned the Economist Intelligence Unit of London to study the effect of recent increases in crude prices on the balance of payments of consumer countries. According to the minutes of an OPEC committee meeting, Secretariat officials thought that the consultants' preliminary figures implied there would be no adverse impact. "And this should therefore be clearly stated as one of the main findings of the report," the committee concluded. (The Economist Intelligence Unit insists that it has maintained "a totally independent, professional position.")

Regardless of the outsiders' conclusions, OPEC selects data to confirm the wisdom of what petroleum ministers have decided through political bargaining. For example, a confidential Secretariat report to members examines the contribution oil prices have made to global inflation by running through a range of conclusions drawn by various

consultants. In the end, however, the memo simply tosses aside all the figures and calls the issue highly philosophical and political.

Nevertheless, a good deal of the Secretariat's effort these days is seriously aimed at peering into the future. Battelle, an American think tank, has been hired to develop what Hassanain calls a systematic approach to establish the real value of crude oil. It is building a mathematical model to compare the relative values of various kinds of crude oil and natural gas with other sources of energy expected to be on the market during the next 15 years. The ambitious model includes assumptions about future consumer demand and the supply of substitutes for OPEC oil. Ultimately, cartel officials hope to feed all the factors into a computer and let it grind out guidance on pricing, from this year until 1990.

THE BEGINNING OF THE END

But OPEC's ability to dictate prices is most unlikely to last that long. The combination of slower growth in consumption, plus the exploitation of new oil sources, coal, nuclear power, and other forms of energy, could well mean that OPEC's share of the oil market will cease to expand within the next 3 to 5 years. After that it should decline, ending the cartel's control over the world oil market. Private and government analysts who study the economics of oil generally conclude that OPEC will begin cracking by 1980. Those who place great weight on OPEC's internal political tensions expect the beginning of the end to come sooner.

The cartel's survival hinges on the willingness of its members to withhold production, but as recent events show, even the wealthiest nations are quickly dismayed when their income drops. Abu Dhabi, with the world's highest per capita income, found itself pinched for cash early this year when its sales unexpectedly declined. The tiny sheikdom could not meet its commitments to aid poorer Arab lands, and Petroleum Minister Mani Said Utaiba openly assailed other OPEC members for failing to assume their share of the cutbacks. "Those revenues are like drugs," observes a U.S. Government specialist. "Oil countries get used to the injections of money and then they have got to have them."

Those producer countries with substantial populations are spending all the revenues generated at present prices. They have embarked on ambitious military and economic development programs, which their leaders are reluctant to curtail. The Shah of Iran's proliferating commitments for education, the latest weapons, and even chunks of West German industry, will probably put his country into debt within 2 years. Algeria and Ecuador are running into the red, while Indonesia and Nigeria are expanding capacity to increase earnings. None of these nations will find it easy to reduce production.

Theoretically, it would be possible for the sparsely populated Arab lands, such as Saudi Arabia, to absorb most of the future cuts. But political and emotional rivalries prevent the cartel from apportioning sacrifices rationally. Over the long run, the Saudis are certainly not going to cut output proportionately more than their rival, the Shah. Iraq has enormous reserves it wants to exploit, but Saudi Arabia and Iran distrust Baghdad's close ties to Moscow and are unlikely to trim

production to help the Iraqis gain a much larger share of the market. Nevertheless, Iraq is now installing capacity that could nearly double its output by 1977.

For a while, OPEC probably can manage the task of prorationing production. But each successive cutback will doubtless encourage cheating on quotas and chiseling on prices. Moreover, there are minimum levels below which production cannot drop without a loss of pressure in the wells and a deterioration of potential capacity. And Kuwait must keep pumping at least 60 percent of its present daily output of 2.1 million barrels in order to supply the natural gas required by its public utilities, port facilities, and refinery.

Production cuts could be made palatable to the producers if OPEC raised prices again, thus preventing a big decline in revenues. And price increases might stick until competing energy supplies reach the market. In fact, some American authorities predict that another price hike is practically certain. One government official calls this "the big rip-off scenario": the producers try to wring all the money they can out of consumers in anticipation of the inevitable break in prices.

PUTTING ON A BURNOOSE

Fortunately for the consuming nations, the cartel is restrained somewhat by Saudi Arabia, which has the largest proven reserves anywhere and is the most frequent dissenter to proposals to raise prices. Already inundated with money, the Saudis believe higher prices will only encourage faster development of substitutes, which could, as one OPEC official notes, "eventually keep Saudi oil reserves permanently shut in underground." The Stanford Research Institute, hired by the Saudi Government, has privately advised the kingdom that its long-term interests would be better served by a lower price.

On the other hand, though Saudi Arabia has the productive capacity to break the cartel price, its leaders have political interests that make them virtual captives of their partners in OPEC. The Saudis like to remind the West of their potential to lower prices, for it adds muscle to the Arab effort to recover Israeli-held territory. But if they acted alone to cut prices, even after a Middle East settlement, that might jeopardize Saudi Arabia's leadership role among Arab nations—and the survival of its regime.

Crown Prince Fahd Bin Abdul Aziz, the dominant figure since Faisal's assassination, is acutely aware of the threat from radical Arabs, and he has a standing army of only 36,000 to defend a nation with about one-fourth the land area of the United States. "Put on a burnoose and look at the world as seen from Riyadh," advises a Washington official who, figuratively, at least, has often done so himself.

> You know good and well that the Americans aren't going to chase you off the throne, because they could get something worse. But if you deny your OPEC partners their chance to acquire great wealth, the Libyans, Algerians, and even wilder ones outside the club might topple you.

Nevertheless, the Saudis like to remind everyone that OPEC's survival still depends on them. Earlier this year, they sold a little over 1 percent of their annual production to Spain on lenient credit terms, effectively discounting the cartel price and warning other OPEC members against trying to force up prices in a soft market. Beyond

that, Saudi Arabia is continuing to expand capacity, at a cost of more than $1 billion this year alone. Possessing all that capacity—already 11.5 million barrels daily—is somewhat like possessing a nuclear doomsday button: rival producers can imagine the consequences if they get out of line.

THE CONSUMER STRATEGY

Previously in disarray, 18 industrial nations finally have banded together to confront OPEC. They are demonstrating considerably more strength than during their initial encounters with the cartel. Having devised a joint strategy in the new International Energy Agency, they have already made solid efforts to tighten the pressure on the producers by building up emergency stockpiles and enforcing conservation, especially in Europe and Japan. For the long run, the consuming nations have pledged, at least in principle, to invest substantial sums in alternative energy sources over the next 10 years and to protect or insure the investments against competition if the cartel dramatically lowered prices.

While oil prices cannot be talked down, senior American officials maintain that the united actions of consumer governments can change market conditions sufficiently to force OPEC to back down. An Assistant Secretary of State Thomas Enders candidly explains: "What we are doing now is getting enough market power to hasten OPEC's demise and to make sure it happens within an acceptable time frame."

The governments of the consumer nations are in effect offering the cartel a choice: to accept a significant price reduction now in return for stable prices over a long period, or to run the risk of a more dramatic break in prices when alternative sources are developed. "The longer OPEC waits," Secretary of State Henry Kissinger claims, "the stronger our bargaining position becomes."

Strategists in Washington talk in terms of persuading OPEC to cut the price from the present level of more than $10 per barrel to $6 or $7. If OPEC accepts the offer, American officials say, the United States should continue to develop other energy sources anyway, if only to keep them on standby as insurance against another embargo or price increase. Details of the U.S. proposal, including such matters as how the consuming countries would guarantee stable prices to the oil producers, have yet to be spelled out. But Washington is clearly willing to pay some price to eliminate the strategic danger of political and economic blackmail from the oil-producing states.

THEY WANT TO JOIN THE RICH MAN'S CLUB

To speed OPEC's retreat and allow its members to withdraw with a sense of dignity, the United States is thinking about offering several other incentives. Officials say they could do more to facilitate the transfer of technology to the oil producers, through such bodies as the joint economic commissions already established with Iran and Saudi Arabia. The commissions encourage the purchase of American goods, of course, and this can increase the buyers' dependency on the United States (as has happened in the case of arms sales in the Mideast).

Officials are also talking about making it easier for OPEC members to invest in the industrial countries. And they are willing, if somewhat reluctantly, to discuss the Shah of Iran's scheme for indexing petroleum prices to a reliable indicator of general inflation rates.

The face-saving gain most vital to many OPEC leaders would probably be a larger role in the councils that they see as important in formulating international economic policy, including the World Bank and the International Monetary Fund. Amouzegar says that negotiations between producers and consumers will succeed "if everyone remembers that you don't need blond hair and blue eyes to belong to the rich man's club." American policymakers recognize such grievances, but, as one pointedly asserts: "Joining the club requires that the producers act responsibly, and that includes an immediate price reduction."

The consumer challenge appears to be gathering force as the months pass. OPEC has been patching together a response ever since last March, when it called the kings, sheiks, and presidents of its member countries to a meeting in Algiers. In a characteristic display of dissension, five heads of state sent representatives rather than attend themselves. The leaders defended their past actions in a "solemn declaration" filled with rhetorical flourishes and later published in an ad. And somewhat brazenly, without the slightest cognizance of their own irony, they warned the united front of consuming nations against erecting artificial barriers "to distort the normal operations of the laws of supply and demand." Obviously, OPEC wants to hang on as long as possible before beating its inevitable retreat.

The Future of OPEC

(By Charles T. Maxwell)

OPEC is widely considered to be a cartel. In strict terms it is not, since it does not formally divide up and allocate markets, its decisions are not formally binding on members (OPEC only "recommends" policy actions), and there is no punitive machinery to deal with backsliders in the organization. However, as a practical matter, OPEC has come to act with a power and unanimity over the last five years that gives it the appearance of a cartel. The difference between being and appearing may be subtle but we consider it crucial. In our view OPEC's ability to wrest concessions from the principal oil users has derived from a number of special factors operating since the early 1970's. Not all of these can be expected to continue. The weaknesses to which OPEC is subject in not being a proper cartel we believe are now going to begin exerting heavy strains on the organization. As a result of these, we expect the following developments to gradually emerge:

A. OPEC's efforts to achieve indexation of oil prices will likely prove unsuccessful. Negotiations on this subject may well go on for years and some accommodative stance involving floor prices in the $4–$6 per barrel range may be agreed, but this would be in the West's interest in any case as an underwriting of alternative fuel developments. Support from OPEC for comparable attempts to politicize the price of other commodities besides oil will also, in our view, prove unavailing. The economic realities of slower growth and questions as to the continuity of OPEC's special relationship with the developing world make achievement of indexation of oil or other commodities doubtful as we see it.

B. OPEC will continue to set world price levels unilaterally for the next 2 years—although we expect increases of only modest size, between 4–6 percent per annum, and presume these to be below rates of world inflation. However, after 1978, OPEC's ability to impose pricing systems by fiat will rapidly erode. OPEC will continue as a strong influence in price-setting through the early 1980's, but power to make decisions will become more widely shared with the new oil producers and principal industrial countries.

C. World oil prices, having made a quantum leap to five times 1970 levels by the end of 1975, now seem likely to markedly slow their pace of increase. We are now assuming today's market crude price of $11.51 will reach close to $14 per barrel by 1980. This postulates an average yearly increase of no more than 4 percent. We would project this as likely to be below the average rate of world inflation over the same time period. We therefore assume

Source: Cyrus J. Lawrence Report, No. 268, "Energy Follow-up," October 28, 1975, 6 pp.

that the price of oil has now begun to come down relative to all other goods and services and that this trend will be sustained over the next 5-year period. After 1980, for at least the succeeding 5 years we would expect almost no upward movement in oil prices at all. In the period after 1985 an entirely different set of production decrement factors begin to impose themselves on OPEC members and major oil consumers, probably setting the stage for the next—higher—pricing cycle.

D. Despite the pressures which we see as limiting OPEC's ability to raise world oil prices in any new quantum jumps, we equally see no evidence of an impending crack in oil prices. We project that the recently attained level of higher prices will be absorbed and, in time, embedded in our Western economic and social systems, that United States and Canadian oil prices now kept below OPEC levels will gradually rise to world market equivalents, and that other forms of energy will continue to make upward adjustments to comparable Btu pricing standards over time.

The principal implications of the above points to investors would be as follows:

—Energy prices, specifically oil, and other fuels by implications, are going to be relatively stable over the new 5 years, after the current period of adjustment is completed. This is likely to be an encouraging factor for world economic growth.

—OPEC pricing demands since 1970 probably touched off an upward spiral of enegy costs to the West that would have occurred in any case over the next decade. In fact, the adjustment having been executed in advance of the eventual economic realities through political means, and having been telescoped into a limited number of difficult years might well have brought us now to a period of greater ease in energy pricing than we could have otherwise expected.

—Within a range of $11.51 to $14 per barrel over the next 5 years for the OPEC marker crude—Saudi Arabia light—North Sea and Alaskan North Slope oil developments continue to look highly economic. The same factors apply to potential reserve development in Canada's Mackenzie River Valley and Delta, and to secondary recovery operations in most U.S. fields. However, on the assumption that oil prices are noticeably slowing in their rate of increase and may be on a plateau by the early 1980's—for reasons outlined later—activities in sharply higher cost areas—$15–$20 per barrel finding and/or production costs—such as tertiary recovery, U.S. east coast offshore, tar sands, oil shale, coal gasification and liquefaction must continue to be viewed with caution by investors. These operations involve high technological and political risks with heavy capital inputs. Their profitability must inevitably involve either Government subsidies or an outlook for substantially higher oil prices in the coming decade to which we cannot subscribe.

It is relatively easy to outline a forward position on OPEC pricing such as this. Hundreds of organizations, including the OPEC coun-

tries themselves, are currently doing it. The real issue involves backing up assumptions with adduced evidence that can reliably confirm emerging trends. We present below the reasoning behind our assumptions that OPEC price increases, 1975–80, will average rates close to 4 percent per annum, that there will be a virtual moratorium on further increases in the period 1980–85, and that there is still low probability of a major crack in oil prices over the coming decade. Our points are as follows:

1. For the period 1975–77, while world oil demand growth is likely to be minimal, on balance it will come entirely from OPEC production sources. (We are assuming demand growth of 1 percent in 1976, and 4 percent per year 1977–80.) In 1978, with the advent of sharply higher production from the North Slope of Alaska—an additional 1 million barrels per day over the previous year—and from major North Sea fields such as Brent, Dunlin, and Cormorant in the North Sea among others—a further 800,000 barrels per day over the previous year—we see OPEC as providing no portion of the increment for that year. In 1979 and 1980, the same situation is likely to occur, with volume increases in world demand assumed at about 1.7–1.9 million barels per day and these being capable of being met fully out of quantified increments from Alaska, the North Sea, and a combination of less well-defined new production from Peru, Mexico, Angola, Malaysia, Australia, and possibly India, Thailand, Burma, Brazil, Guatemala, et cetera. This implies that OPEC production, now about 28 million barrels per day out of Free World demand of 40–41 million barrels per day, might rise to the area of 30–31 million barels per day by 1978 and remain on that plateau for some years into the 1980's. OPEC volumes would still represent close to two-thirds of Free World demand, but would not be necessary to meet incremental demand at the margin. The psychological effect of this would be obvious: OPEC members could not look forward to revenue gains based on higher volumes unless they elected to take market share from another oil producer, presumably by competitive discounting. For prospective OPEC members such as Peru, Mexico, and Malaysia, the indications would be that to join OPEC would imply stagnation of volume growth. This would provide incentive for these countries to remain outside the organization so as to be able to discount effectively. Even within the organization a number of economically weaker countries might soon be under pressure to generate more revenue growth than flat volumes and gradual price increases would imply. Such continuing problems would appear to bear unfavorably on the sustainability of OPEC's present "unanimous" policies on pricing.

2. The above thoughts lead to the complicated issue of future membership in OPEC and how to deal with new applicants. Trinidad has recently been turned down in its bid to join OPEC's presently constituted 13 members. The reason given involved Trinidad's relatively small production. If that were really the case, however, then why was this criterion not invoked in recent entry of Ecuador and the Gabon? It would appear to us that OPEC's

internal politics are pivoting on the issue of Arab dominance of the organization. Currently, seven OPEC members are Arab states. Since all of these are members of the 9-nation Organization of Arab Petroleum Exporting Countries (OAPEC) and all are involved in the confrontation with Israel, there are general political ties among the seven that reinforce specific economic ones concerning the production and export of oil. Obviously 14 voting members to include Trinidad would end the present Arab majority. Additional non-Arab members would push the seven-country group into a minority position. As OPEC currently attempts to solve issues by "unanimous" vote, and compromise is the essence of this, effective decisionmaking could become more and more difficult if OPEC were converted into a little United Nations. On the other hand, to keep potential members out would involve even more explicit risks of competitive discounting and loss of market share, unless members were prepared to gradually reduce volumes to allow new producers outside the organization access to most of the growth in world markets. The membership issue thus appears to be a thorny one. However, it will only become serious from 1978 onward when production increments from countries such as Peru, Mexico, and Malaysia reach levels that begin to hurt individual OPEC members. OPEC has some time—but not too much.

3. As implied above, we view the Arab-Israeli confrontation as a unifying factor in solidifying some elements of political policy among the seven Arab members of OPEC. We do not, for instance, find creditable the assumption that Saudi Arabia joined the Arab embargo of October 1973 for economic reasons. The motivation was plainly political. However arrived at, the embargo did create a new set of economic conditions that permitted other non-Arab members of OPEC such as Venezuela, Iran, and Indonesia to push strongly for official OPEC pricing of crude at levels equivalent to offers they were then receiving in the $15–$20 per barrel range. The resulting compromise on prices still carried OPEC to prices above $10 per barrel in early 1974 from the previous level of just over $5 per barrel arrived at in the fourth quarter of 1973.

It is precisely the unifying effect of this political tie among the Arab members of OPEC that we see as potentially weakening under the influence of a growing détente between Israel and Egypt in the Middle East. We do not believe full peace in the area is achievable over the next 5 years. Even if it were, in no way would this imply that the economic interest of the Arab oil exporters in keeping the price of oil high would be lessened. Nevertheless, the political unity of the Arab world, always at its best when arrayed in direct confrontation with Israel, may well suffer erosion under assumptions of a gradual demilitarizing of the conflict. The key country is Egypt, which we foresee will now begin to redirect its national priorities toward the vast industrial reconstruction it must undertake to survive its poverty and population problems. We anticipate that Egypt's turn will be accomplished in cooperation with Saudi money and backing. We visualize the emergence of a Cairo-Jeddah axis in the center of the Arab world that will pur-

sue moderate social and foreign policies, emphasize internal economic development in the two countries—probably along with Jordan and the Sudan—and represent a solid wedge between the radical Arab states of Libya and Algeria on the western flank, and Syria and Iraq on the eastern. From such a new alinement, more flexible policies toward Israel would be implied. From this would undoubtedly come more flexible policies on a host of other issues—including oil pricing. On balance we would not hold that an end to military confrontation in the Middle East would necessarily act to bring the price of crude down. Rather we would argue that under conditions of intermittant war there, the price of oil has nowhere to go but sharply up. As previously indicated, we do not see this as the more likely course of events.

4. Today the OPEC nations are ranged with most of the developing countries against the Western industrial states in a confrontation over commodity pricing vs. the relative costs of manufactured goods and services. We do not believe this confrontation will be sustained long, at least not in its present form. First, we see OPEC's enthusiasm for financially supporting the poorer countries until their "just economic rights" are achieved as already waning, if not foreclosed. The Arab members of OPEC do have substantial political motivation for continuing a stream of promises to the underdeveloped countries of Africa, Asia, and South America in return for support against Israel, but these assurances of future help are seen by the lesser states as increasingly ephemeral. Disillusionment as to the reality of Arab aid and greater recognition of the manipulative aspect of its purpose is now likely to come quickly as we see it. On the other hand, the larger and more powerful OPEC states have a new and developing alliance with the Western industrial states they are increasingly linked to and are trying to emulate in industrial growth (and social system) rather than with the Third World they are leaving behind. We foresee today's confrontation over oil prices as moving toward a convergence of interests between the principal members of OPEC and the major industrial states in which they come to support each other in a number of areas including oil pricing. We believe that by 1980 American, European, and Japanese penetration of the export markets represented by OPEC will be so deep, and OPEC's financial involvement with the West so established, that neither will have anything to gain from confrontation. We believe American policy, for one, will accept high energy prices as being favorable to the U.S. world trade (and political and military) position. At $14 per barrel, world oil prices will provide substantial incentives to develop further U.S. reserves, and will not exert as much pressure on the U.S. balance of payments as on some of our other trading partners (and competitors).

We predict that as the sharp spurt in oil prices from $1.80 to $11.51 (market crude figures) over the past 5 years is run through the industrial system and becomes embedded in the world cost structure, it will create different types of economic activities, new areas of technological

research, and changed directions of investment, each of which will become allied to interest groups that will not wish to reverse course. We foresee that within 5 years high energy prices will have a base of approval within the major industrial countries and will be defended by many elements in the West as economically and socially justified. In the last analysis energy prices will stay high, that is, $11.51–$14.00 per barrel oil equivalent, because the powerful consuming countries will eventually support and sustain these prices in cooperation with OPEC.

OPEC and the Industrial Countries: The Next 10 Years

(By Thomas O. Enders)

From 1947 to 1973 the shift of power is exponential. In 1947 the United States ceased to be a net exporter of oil; the basing point for oil prices moved from the Gulf of Mexico to the Persian Gulf, and with it the underlying leverage. Although the Organization of Petroleum Exporting Countries (OPEC) was formed in 1960, its membership was so disparate that at first it did little to exploit the shift. With prices low, U.S. dependence on imported energy grew to 14 percent of energy consumption in 1972. Europe's dependence on energy imports grew from 33 percent in 1960 to 65 percent in 1972; Japan's from 43 to 90 percent in the same period. By the late 1960's OPEC members were acting more masterfully to turn the increased dependence to advantage; prices began to move up. The 1973 October War revealed OPEC's full power.

It is important to be precise about the implications of this shift for the industrial countries. First, the cartel action continues to pose a short-term problem of economic management. The sharp jump in oil prices accounted for about a quarter of the average 14 percent inflation experienced in 1974 among the member-countries in the Organization for Economic Cooperation and Development (OECD). Industrial dislocation and unemployment caused by the 1973–74 embargo, and conservative demand-management policies in Europe and Japan designed to overcome oil-caused balance-of-payments deficits helped trigger the present recession. No doubt the effects of the continued high price of oil on internal demand will make it more difficult to design policies to return the industrial economies to a high rate of growth. All of these difficulties are important and costly, but they are—or can be made—transitional.[1]

Second, there is a medium-term problem of financial management. Most recent studies suggest that the accumulation of financial assets by OPEC will peak in the late 1970's or early 1980's at levels perhaps in the range of $200 to $250 billion in 1974 dollars. This is an enormous total by present comparison—official holdings of financial assets by all the OECD countries totaled $118 billion at the end of 1974—but it is less than was estimated a year ago. Although the political and financial implications of the expected accumulations cannot yet fully be judged, recycling of oil dollars has proceeded more smoothly than feared, and this problem appears manageable.[2]

Third, however, there is a major long-term transfer of real income, which has only begun. The exact time-path of the transfer is difficult

[1] See Hollis B. Chenery, "Restructuring the World Economy," *Foreign Affairs*, January 1975.

[2] Compare Khodadad Farmanfarmaian *et al.*, "How Can the World Afford OPEC Oil?" *Foreign Affairs*, January 1975.

Source: *Foreign Affairs*, vol. 53, No. 4, July 1975, pp. 625–637.

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to determine, since it depends in part on how rapidly the financial assets OPEC is accumulating are converted into imports of goods and services and how long the high price is sustained. In 1974 OPEC increased its imports of goods and services from OECD countries by about $8 billion in real terms (equivalent to somewhat more than 0.2 percent of OECD's 1974 gross national product). Into the future, OPEC imports from OECD countries, financed by its accumulated financial assets, will continue to grow for some time after its export revenues peak. It is possible that they will reach $110 billion by 1980 (in 1974 dollars), as opposed to about $30 billion in 1973 (in 1974 dollars). The $80 billion gain, equivalent to more than 1.7 percent of the expected GNP of the OECD group in 1980, can be taken as an estimate of the peak value of the real annual cost of the cartel action to the industrial world.

These costs, imposed at a time when most of the industrial countries are having increasing difficulty in meeting the social, economic and security requirements of their people, are of major significance. It is important to realize that these are not one-time costs; they accrue each year.

Fourth, and perhaps most important of all, there are the political and strategic implications of vulnerability to a new interruption in supply. Existence of the cartel, and the high price for oil that it has imposed, are coordinate with that vulnerability; one presupposes the other. As long as the cartel is effective, the central element of energy in the industrial economies will be subject to manipulation, both as to prices and availability, by supplying countries which do not have, and may well not develop, an inherent interest in their prosperity. We must be ready for the exercise of this power in a new Middle East conflict: whether and how it would be used in other circumstances we do not know. But clearly the threat to the maintenance of stable economic conditions is significant.

As long as the cartel is effective, it will also impose a permanent tension among the consuming countries because of the wide disparity in their dependence on imported oil. Canada, the United States, and soon Britain have options that Japan, Spain, and Italy do not have. Competitive offers of special economic and political terms to secure petroleum supplies are widely recognized as likely to degrade the bargaining position of the consumers as a group. Such protective mechanisms as oil-sharing in an emergency and financial solidarity can provide a counterweight, and these have now been effectively agreed upon, largely through the International Energy Agency (IEA), formed a year ago.[3] But over the long term the impulse will be strong to substitute producer/consumer lines of force for those now existing among the industrial countries of Europe, America and Japan. If that occurs, the internal contradictions between the security and the economic interests of the industrial countries will grow and their political coherence will dissipate.

So far, the short-term problems of economic and financial management have received the greatest public attention in the industrial countries. Exaggerated fear of their difficulty has given way to relief that they are not intractable. But the real costs of the cartel—the longer-

[3] See Henri Simonet, "Energy and the Future of Europe," *Foreign Affairs*, April 1975.

term transfer annually of goods and services, and the potential deterioration of the security and political position of the industrial countries—have yet to be fully faced.

The real-income losses of the consumers are the gains of the producers, but in other respects the effects of the cartel action are not reciprocal. Producers share with consumers an interest in effective management of the short-term economic and financial problems. Return of the industrial economy to a high rate of growth strengthens demand for oil and thereby strengthens the cartel, and the protection of financial assets now is essential to future real transfers and growth. It is only by de facto integration into the industrial economy, through massive increases in trade, industrial investment and technological transfer, that the producers can realize their real-wealth gains. Four-fifths of OPEC's imports now come from the OECD group; as they rise, the interpenetration of consumer and producer economies will become a central datum of the international structure.

In politics, the lines of potential development lead in different directions. When the October war revealed its power, OPEC was the loosest of coalitions, harboring at least four contenders for leadership—Iran, Saudi Arabia, Algeria, and Venezuela—and a spectrum of traditional state rivalries. But to consolidate its gains and survive this year's slump in oil demand, OPEC has had to develop more coherence. Saudi Arabia, which some believed a year ago might play the maverick and use its vast producing capacity to bid the oil price down, has swung into a supportive role. The Saudis engineered the most recent overall price increase at Abu Dhahi in November, then created conditions for, or acquiesced in, production cuts deep enough to balance OPEC supply with demand. Saudi production in April was less than 6 million bbl/d, down from 9 million bbl/d at the peak last summer; meanwhile Saudi capacity has reached more than 11 million bbl/d. Leadership competition among the major states was muted. An informal system emerged in which states wishing to increase exports could do so by shaving quality differentials and lengthening credit terms, while the basic Government take of $10.12 per barrel remained intact.

This growing cohesiveness of OPEC has given it an opportunity to bid for the leadership of the whole developing world. The raw materials doctrine developed by Algeria—that the market power of consumers has long kept down raw material prices and thus the economic development of producers, and that cartel action is needed to "revalorize" earnings, along with "indexation" to protect the new wealth by increasing oil prices in proportion to increases in the prices of OPEC imports—served first as a defense against the resentment of other less-developed countries whose growth prospects have been damaged or halted by high oil prices. Increasingly, the doctrine is becoming a means by which the oil producers cement their own unity and that of the LDC bloc as a whole.

At the same moment that their economic integration into the industrial world is accelerating, OPEC members are asserting their political identity with a coalition of developing states intent upon challenging the industrial world. In doing so OPEC is making negotiation of stable new institutional ties with the industrial countries far more

difficult, as the failure of the producer/consumer preparatory meeting this April showed. In time, the oil producers will expose themselves to escalating demands from the LDC's. And the tension between OPEC's economic and political interests will eventually increase.

II

It is in the interest of the industrial countries—indeed, of all consuming countries—that conditions be created in which OPEC loses and cannot subsequently regain the power to set oil prices at artificially high levels. What are these conditions? Essentially, that the market for OPEC oil be compressed to, and held at, a volume at which the mechanism for allocating production cuts within OPEC can no longer function.

It is possible to imagine a number of scenarios in which individual producers break ranks and slash prices. But none of these has much plausibility in view of the great economic and political interest all OPEC members have in high prices, and because of the political pressure from their colleagues to which many are vulnerable. In order to predict with some confidence that several major members will cut prices in attempting to increase their market share, the following conditions must be present:

—Such a group of countries must have significant unused capacity, and practical possibilities for shifting production cuts on the "low absorbers" such as Saudi Arabia must have been exhausted;

—They must be unwilling to accept a stretch-out of their development and military spending programs;

—They must be in payments deficit on current account;

—They must have reached the limits of drawing down accumulated financial reserves and of borrowing within or outside OPEC.

—Relief through increases in the real price of OPEC oil must have been exhausted.

We know that there is little chance that these conditions will occur or can be created between now and the end of 1977. As a result of the second mild winter in a row, the recession, drawing down of inventories, and price resistance, the OPEC export market will be down to an average of 27 million bbl/d this year from 30 million bbl/d in 1973. With the end of the recession, the steady decline of oil and gas production in the United States, and a return to normal winters—all of which seem overwhelmingly likely—oil export demand will return to or exceed pre-embargo levels by 1977. If real prices are maintained, OPEC exports might reach the $125 billion range (in 1974 dollars) in 1977, reflecting an export demand that might by then have risen to 31 million bbl/d.

As to the amount of the real income transfer, OPEC import expenditures have risen faster than expected: 27 percent by volume in 1974. They may do so again in 1975, although limitations on port facilities and resultant demurrage and delay in the Persian Gulf are already significant and growing. Thereafter constraints on internal transport and distribution are likely to take over. The current account surpluses of OPEC as a whole are likely to remain large—on average about $50 billion a year (in 1974 dollars) in the period 1975–77—but some individual producing countries will probably go into deficit: Algeria

and Indonesia this year, Ecuador in 1976, Venezuela in 1977. These countries now have some excess capacity, but the volume is small enough (perhaps 0.5 million bbl/d that they would like to use) so that others in OPEC could accommodate it by reducing their production. Intra-OPEC loans (a possibility Algeria has already broached) would be another means of adjustment. Some slowdown in Algerian and Venezuelan development spending is also likely.

In the period 1978–1980 a major change is likely to occur in the OPEC export market as North Sea, Alaskan, Mexican and Chinese oil come on in quantities. As a rough guess, net OPEC exports might then fall to 25 million bbl/d or even less. With a constant real price of oil and continued import increases, Iran and most OPEC members other than Saudi Arabia and Kuwait would move into balance-of-payments deficit on current account. Drawdown of accumulated assets would provide some cushion; but there would be strong contradictory pressures—on OPEC countries collectively to raise the real price of oil and on some individual members to improve their market share by shaving prices. Hence this could be a period of substantial stress on OPEC, from which it might emerge either with a higher real price and renewed discipline or in disorder and with substantially lower prices.

In the period of 1981–85 the swing element, insofar as can now be estimated, will be the U.S. Outer Continental Shelf (OCS) and Naval Petroleum Reserve No. 4 (NPR–4) in Alaska. On the basis of geological surveys these regions are now roughly estimated to provide 5–7 million bbl/d in this time frame. If they do, the overall OPEC market may stabilize at about the 25 million bbl/d level, and the pressure on OPEC cohesion, already substantial, would increase. (This is similar to the forecast in the long term energy assessment of the OECD, published this year.) If on the contrary these regions prove unproductive (so far only two dry wells have been sunk in NPR–4), or if for economic or other reasons they are not fully exploited, pressure on OPEC would ease substantially.

What are the chances of substantial deviations from these forecasts? Economic stagnation in the OECD and large-scale new finds like the Mexican fields would compress the OPEC market below these predicted levels.[4] On the other hand, boom conditions or failure to solve the rate, financing, and siting problems of nuclear-fueled electrical utilities and thus to achieve the high rates of nuclear-power growth expected (from 20 gigawatts in 1973 to 200–240 in 1985 in the United States) could lead to a significantly larger OPEC market.

There are three conclusions to draw from this analysis:

First, there is a likelihood of strong stress on the cartel toward the end of the decade.

Second, maintenance of that pressure thereafter depends critically on the exploitation of the OCS and NPR–4.

Third, the potential swings become very high in the 1980's. If the cartel loses its power to set prices in the 1978 to 1980 period, and successful exploitation of the OCS and NPR–4 maintain conditions in which it cannot be reconstituted, OPEC's annual export earnings

[4] Such new producers as Mexico may, of course, join OPEC, and in any event conform their price policies to those of OPEC. The point is that their need for export outlets will still affect the market available to OPEC as a whole.

might fall from the assumed 1977 peak of $125 billion (in 1974 dollars) to half that or even less. If OPEC were able to maintain its price-setting power and thus offset the declining market by higher real prices, the income could stay at the $125 billion level, and the higher real price would have a dampening effect on economic growth in its major markets. In both cases the real transfer through actual imports would adjust with a lag. The swing between the two cases ($60 billion or more in 1974 dollars), plus the negative impact on growth, could exceed 1.5 percent of the real OECD gross national product annually. And, of course, the political leverage of OPEC hinges almost wholly on which case applies.

III

How can the consuming countries increase the possibility of an outcome in their favor? And at what cost?

First, by conservation. If President Ford's conservation proposals of January 1975 were fully adopted, and if they were matched by similar European and Japanese programs, they could be decisive. These measures were originally designed to reduce U.S. imports by 1 million bbl/d by the end of 1975, 2 million bbl/d by the end of 1977, and over 4 million bbl/d in 1985 (below what they would otherwise be).

Through the actions announced by the President on May 27—increased import fees and the proposed decontrol of "old" domestic oil prices—the United States can still make progress toward his goals.[5] However, what Congress will finally do, as well as the actual impact on consumption, may not be clear for some time. Meanwhile Europe and Japan have moved faster than the United States to take effective conservation measures, but the combined bulk of their savings is not yet large.

Although the controversy has not been settled, the balance of evidence is that savings of the magnitude proposed by the President will not have growth-depressing effects. In the United States the amount of energy used per dollar of GNP fell from 107,000 Btu's to 90,000 in the years 1947–73, a period of rapidly rising income growth. High prices will accelerate the decline in this ratio.

Second, by stimulus to the development of alternative sources. Here three sorts of action are required:

1. *Relaxation or removal of existing policy constraints.*—Almost every form of energy enterprise in the industrial world is encumbered: U.S. and Canadian gas and oil by price controls; nuclear power everywhere by inadequate or outmoded utility rate structures and by siting restrictions: coal by environmental limits; new hydrocarbon exploration by legal restrictions. The relaxation of these constraints is above all a domestic political question, although it can be spurred by international review and analysis.

2. *Provision of financing.*—Estimates of financing required over the

[5] With much of 1975 already gone, the White House currently estimates that the effect of the May 27 actions would be a reduction of 0.1 MMBD by the end of 1975, 0.7 MMBD by 1977, and 2.5 MMBD by 1985. The impact of the President's total legislative program, however, including measures to stimulate production as well as conservation, would be a reduction of 0.7 MMBD in 1975, 2.2 MMBD in 1977, and 7.2 MMBD in 1985. White House Fact Sheet, *The New York Times*, May 28, 1975, p. 20.

next decade for energy development in the industrial countries center in the trillion dollar range (in 1974 dollars), equivalent to a fifth or a fourth of expected total capital formation. The question posed is whether energy investment should receive some form of priority access to capital markets, through the use of Government guarantees or government-sponsored intermediaries. For such costly developments as oil from shale, tar sands, or coal liquefaction (which may come in in the range of $15 a barrel), substantial Government financing, including such devices as the sharing of initial "front-end" costs, must be employed. Such projects lend themselves to international cooperation, with possible deals combining funding with access to technology and, in an emergency, access to product. On the other hand, many governments have so far hesitated to provide assistance to conventional energy enterprises, believing it disadvantageous to substitute political priorities for economic calculation. But some support is inevitable even in this area.

3. *Protection against "downside risk" for private capital investment.* To the extent that the financing of new energy sources is provided through Government channels, such capital investment need not be seriously affected by changes in the overall price of oil, or of energy in general. As suggested above, Government financing is likely to be the preponderant mechanism for most of the nonconventional energy sources such as solar and geothermal power, oil shale, or the Canadian tar sands.

The real problem concerns the major expansion of conventional sources, for which private investment must be the principal mechanism, but for which the anticipated costs are significantly higher than the price level to which OPEC oil might conceivably fall over the next 10 years. New North Sea oil (less the share taken directly by governments) comes in in many cases at $5 or even $6 a barrel. Conventional nuclear facilities, coal, and the vital OCS and NPR–4 may all be in the $6 to $8 range for their energy-equivalent output. All of these investments are price sensitive both at the outset and as they go along: They may not be undertaken, or may be delayed, if there is an actual or perceived risk that international prices will fall to or below that range in the course of development.

Such downside risk is closely linked to the future viability of the cartel. If, for example, the cartel were to lose its ability to maintain a high price in the stress period of 1978–80, the development of OCS, NPR–4 and North Sea oil could all be retarded or stopped. That in turn would result in a substantially higher OPEC export market than would otherwise occur, and conditions for renewed cartel action could be created. Put the other way around, by protecting against downside risk it is possible to be fairly certain that expected major energy investments will occur, and thus increase the odds that in the early 1980's the cartel will lose its power to set the oil price and not regain it thereafter.

IV

The problem of downside risk for investment in conventional energy sources is widely recognized. But there is much controversy over its solution. Broadly speaking, two main concepts have been put forward.

The first of these may be labeled that of "deficiency payments." Under this approach, private firms engaged in the development of energy sources would receive a subsidy from their national governments if the overall oil price falls, possibly set to cover the difference between some base price and the market price.

The advantage of this approach is that any drop in price is passed on to the consumer. The major disadvantage, however, is that under this approach it would almost surely be impossible to meet national self-sufficiency targets. In the event that overall oil prices fall, consumption is bound to be restimulated, and by substantial amounts. Thus, in contrast with the forecast that demand for OPEC oil by 1980 might be in the range of 25 million barrels per day at present oil prices, the demand for OPEC oil can be estimated to rise to 35 million barrels per day if the overall oil price were to drop to, say, $4 per barrel (in 1974 dollars). Even a remotely comparable rise in consumption would leave the industrial world still highly vulnerable to embargo and would in turn lead to new cartel action, as surely as the low prices and high dependency of the 1960's and early 1970's stimulated it in the first place.

Other drawbacks of the deficiency payment approach are the high costs to the taxpayer and the uncertain credibility of a system dependent on annual subsidy appropriations for energy companies by the American Congress or by the parliaments of OECD countries.

The second approach to the problem can be described as "border protection." The object of this approach is to prevent imported oil from being sold to the consumer within the industrial economies at disruptive price levels, that is, at levels below the amounts required to offer the prospect of a fair return to the investors in expanded energy sources. The means required to implement this approach could be varied according to the national choice of the individual consuming countries; tariffs, import quotas, or variable levies might be used separately or in combination to produce the intended result. But the price levels maintained to assure adequate domestic investment, it may be emphasized, would be fixed only in terms of price levels to the consumer. The price actually paid to the OPEC producer would continue to be determined by the international market situation—in effect, by the relative bargaining power of consumers and producers. This is not, in short, a system for guaranteeing the return to the OPEC countries; indeed, its basic objective is to permit market forces to operate, eventually in favor of the consuming countries.

The major advantage of this approach is that national self-sufficiency goals can be protected. Through the stimulation of the necessary investment in expanded conventional sources, this approach provides high odds that OPEC's market will in fact be compressed to a volume inconsistent with continued cartel action.

The principal disadvantage of the approach is that the citizen as consumer does not receive the full benefit of whatever price drops may result over a period of time; on the other hand, the citizen as taxpayer in the consuming countries should have a very much lower burden under most of the possible techniques for achieving the basic goal. As for the question of continuing credibility, the border protection approach cannot be described as 100-percent credible, since

Congress or parliaments would be under substantial pressure to remove protection and to favor the consumer when and if prices fall. However, the credibility of this approach should be greater than that of the deficiency payments approach because border protection can be legislated or decreed in advance. Once in place, and once investments have been made with reference to it, the system would develop a political constituency that would tend strongly to validate it.

Any policy of downside protection, however, will be of limited help and may disadvantage the countries that adopt it if only a few do so. Here, as in every other aspect of the energy problem, it is important to develop a new calculus of interest:

—Energy-poor countries are interested in low prices to their citizens, but also in seeing energy-rich industrial countries develop their resources. For only if they do will demand on the international market fall and oil prices come down.

—Energy-rich countries like Britain, Canada, and the United States are interested in seeing energy-poor countries like Italy and Japan adopt the same level of protection. For the main burden of investment must fall on the energy-rich, while the primary advantages of lower prices caused by the resulting compression of OPEC's market will accrue to energy-poor countries that import much of the energy they need. Without a common level of protection, this would leave the former locked into a high-cost energy economy, and at a competitive disadvantage.

—All industrial countries have an interest in putting OPEC in the position of residual supplier of oil, with a market kept small enough to prevent renewed cartel action.

Recognizing the basic common interest that underlies this calculus, the industrialized consuming countries, meeting in the International Energy Agency, have already reached a preliminary agreement in principle. On March 20 of this year, they agreed on a minimum safeguard price system, under which each country would use means of its own choosing to prevent oil from being sold in its domestic economy below an agreed common price. The system is to be elaborated by July 1, 1975.

The question that remains is, of course, the level to be adopted for the agreed common price. Here the divergent interests of the energy-rich and energy-poor members of IEA must be reconciled. Broadly speaking, a high level for the agreed common price would benefit energy enterprise and thus countries with important energy resources. A low level would favor consumers, and thus countries that must import most of their oil.

The costs and benefits of a given system and price level can be analyzed as follows. If the level of protection is set unnecessarily high, the result will be that more investment would be undertaken than turned out to be required. With an annual investment bill estimated at roughly $100 billion per year, the real cost of any excess investment would be some relatively small part of this amount.

The opposite risk is less easy to measure precisely. If the level of protection is set too low, the result would be not enough investment to deprive OPEC of its ability to set prices. Broadly speaking, what would then be lost to the consumer countries would be the difference

between the level of their real-income transfers to the producer countries at cartel-set prices and the level of the same transfers if the cartel fails; in addition, the growth-retarding effect of higher prices must be weighed. As analyzed above, it does not seem excessive to estimate this potential difference at as much as $60 billion or more a year (in 1974 dollars). More important, the cartel would retain its power to disrupt the industrial economies by embargo, and the risk that is economic power over the consumers will be transmuted into political power would grow.

In short, the level of protection chosen must be evaluated, in effect, like the premium on an insurance policy. The penalty for guessing wrong and doing too little is incommensurately heavier than the costs of doing too much.

V

An exponential increase in the power of any group of countries, occurring rapidly and initially at the expense of others, is never easy for an international system to absorb. Obviously, the nations fortunate enough to have major oil resources will be able, in any event, to maintain a greatly improved power status and to advance the lot of their people immensely in the years to come. Only the degree of change is now at issue, and with it the broader question of a lasting accommodation that will make the adjustment bearable to oil consumers—poor countries even more than rich—and that will evolve toward a world economy in which all may advance together.

Because of the interdependence of their trade and investment, the industrialized countries hold vast reciprocal power over each other's well-being. But a structure of economic, political, and security institutions governs the exercise of that power and makes its possession tolerable. No such structure exists between the oil-producing and oil-consuming states. Its creation will ultimately be in the interest of both producers and consumers: for the producers, because their dependence on the industrial economies is growing inexorably as they convert oil earnings into real imports and new industries; and for the consumers, because oil imports and oil-related financial transactions will play a major role in their economies, whether or not OPEC retains its capacity to set prices.

But for three reasons it is too early seriously to address the design of that structure.

First, we still do not know how rapidly and how forcefully the consumers will act to change the underlying market balance. In 1974 the industrial countries moved fast to draw the consequences of the embargo, establish a common strategy in the International Energy Agency, and draw up domestic energy programs. But by the time their response was ready at the start of this last winter, the recession had replaced energy as the dominant economic issue. The consequence has been to delay and to dilute energy action. As the industrial economies pull out of the recession and rising demand for oil creates conditions for new oil price increases, the politics of energy within the industrial countries will again change. It will not be possible to judge the full scope of their response until next year.

Second, it is not yet clear how far the producers will press their bid for leadership of the developing world. Should this become a permanent, dominant aim of their foreign policy, chances of successful negotiation of a new economic and ultimately a political framework between producers and consumers will be low.

Third, the future internal structure of OPEC is not yet knowable, for it depends on the way in which bargaining over production cuts develops. At one extreme would be a structure in which each OPEC member insisted that cuts be proportional to base-year output or capacity. In this case, Saudi Arabia and Kuwait would accumulate much of the OPEC financial surpluses, the industrial development of other OPEC members would be slower, and the cartel would be more fragile. At the other extreme, Saudi Arabia and Kuwait might take up most of the necessary production cuts, with the result that the industrial development of the group would accelerate, while the accumulation of financial assets by all OPEC members would be less. If developments approximate the first case, the real institutional problem between consumers and producers will be the management of the huge financial assets of a small number of countries. If events fit the second case, the problem will extend to all producers and cover a far wider range of economic and industrial problems.

The inability of the preparatory meeting called by President Giscard d'Estaing in April to agree on a concept for future discussions between producers and consumers reflected these uncertainties. But bilateral contacts to organize a new meeting are already under way, and the search for that concept will go on, for there can be no equilibrium in the world economy or in world politics until a more balanced relation of power between oil producers and industrial countries is reached, defined, institutionalized.

Those Unspent Balances

For 18 months the problem of OPEC's surplus oil revenues has occupied the minds of Western statesmen, bankers, and economists. Following the huge price increases of January 1974. when it became obvious that the host governments—for the time being, at any rate—could not possibly spend all the money they were raking in, several pessimistic studies suggested that the problem of the unspent balances was virtually insoluble. In recent months the pendulum appears to have swung the other way. The prevailing view in U.S. Treasury and banking circles seems to be that the problem of financial imbalance will be temporary and of manageable proportions.

Sharply challenging this more complacent view is a study by the well-known U.S. oil consultant Walter J. Levy. He does not dispute that the OPEC balances are running at a substantially lower level now than seemed likely a year ago. The main reasons are that OPEC oil exports, and therefore revenues, have been adversely affected by the business recession, mild weather, and consumer resistance to the excessive price; that OPEC governments have been showing an unexpected ability to spend money on imports of goods and services: and that they have been making grants and loans to governments of the developing countries. But Mr. Levy thinks that too much is being read into this improvement. In a detailed and well-argued study just made available,[1] he suggests, in contrast to the views held by others, that OPEC countries as a whole will still be running a substantial surplus on current account at the end of this decade. His figuring, which is in some ways analogous to the latest estimates by the World Bank, is well worth examining.

WHY A PROBLEM?

But first we may usefully ask the simple question why the OPEC countries' inability to spend all their current income on goods and services constitutes a problem for the rest of the world; it might at first sight be regarded as an advantage. If the oil exporters do not spend all their income, then the importing countries do not have to send so many exports in exchange. While the former group runs a balance-of-payments surplus, the latter group is able—and, indeed, compelled—to run a deficit. In other words, the importers obtain part of their oil on credit, and this means that their standard of living is higher than it would be, if they had to pay in full.

This, however, is only part of the story. The oil-importing countries are borrowing from their suppliers to pay for part of the oil, and on these loans they have to pay interest. It is all very well to borrow money (and pay interest) in order to finance productive investment,

[1] "Future OPEC Accumulation of Oil Money: A New Look at a Critical Problem," W. J. Levy Consultants Corp., 30 Rockefeller Plaza, New York, N.Y. 10020.

Source: *The Petroleum Economist*, vol. 42, August 1975, pp. 282–84.

since this will yield a return out of which the interest payments can be met. But to borrow in order to pay for current consumption is quite a different matter. It involves living beyond one's means, and saddling oneself with an ever-increasing burden of debt. This is one reason for concern about the unspent balances.

Another reason is that a high proportion of the surplus oil money is on short-term loan in various financial centers. And the OPEC governments have the power to shift these very large balances at short notice from one center to another, with potentially disruptive effects on exchange rates and the world's financial mechanism. It must be admitted that this fear has so far proved groundless; even during the recent bout of weakness in sterling, there was not panic exodus of oil money from London. But one never knows.

Nor is it sufficient to look at the question of the unspent balances in global terms. Oil is imported by individual countries, each of which has to bear the burden of the cost on its own balance of payments. Last year's fear—somewhat exaggerated, as it turned out—was that the unspent balances would find their way into one or two safe havens, especially the United States, solving the payments problem so far as those countries were concerned, but leaving all the others out in the cold. For example, Italy, which has to import most of its energy requirements, was hard hit by the excessive rise in oil prices, but was not in a position to ease its immediate payments problem by attracting OPEC oil money. And of course, the developing nations are generally in an even worse plight.

So the financial problem resolved itself largely into that of devising ways of recycling the OPEC oil money, largely through the IMF and the OECD, so that all the oil-importing countries might be helped to meet the bill for their essential supplies. But as most people are now aware, the process of recycling is fraught with difficulties.

From the standpoint of the world economy therefore, it would have been far better if the rise in oil prices had been more gradual and more moderate; then the financial problems would not have arisen. However, economic forces are playing their accustomed role in gradually bringing about a new equilibrium. How soon the desired balance will be attained will depend in the main on three factors. The first is the level of oil prices during the next few years. The second is the degree of success that attends the efforts of the oil-importing countries to reduce their dependence on imported liquid fuels. The third is the growth of exports (in volume and value) from the oil-exporting countries.

A high degree of uncertainty surrounds each of these variables—most of all in regard to the likely course of oil prices. And since the size of the OPEC balances is the residual item in the equation, there is room for wide differences of opinion about the year in which OPEC surpluses are likely to disappear. Mr. Levy's assessment of the probable timing may be contrasted with the conclusions of three other recent studies,[2] those of Morgan Guaranty, the Irving Trust and the First National City Bank (Citibank).

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[2] See the Morgan Guaranty Co's "World Financial Markets," Jan. 21, 1975; Irving Trust's "The Economic View From One Wall Street," Mar. 20, 1975; and Citibank's "Monthly Economic Letter," June 1975.

CONTRASTING PROJECTIONS

The consensus of opinion among these three last-mentioned authorities is that the current surplus of the oil exporting countries is likely to disappear by 1978 or 1979. Indeed, all expect that by 1980 the OPEC group will be running an aggregate deficit on current account, ranging from $7 billion to $106 billion according to the assumptions made. The Levy study, on the other hand, envisages a continuing surplus for that year of $47 billion. In consequence, there is an even wider difference of opinion about the accumulated balance that will stand to the credit of the OPEC countries at the end of 1980. The projections range all the way from the Irving Trust's $22 billion (on one of their alternative assumptions) to Mr. Levy's $449 billion. Details are given in the table.

OPEC FUNDS: ALTERNATIVE PROJECTIONS[1]

	1975	1977	1980
OPEC oil exports (Mn b/d):			
Levy	26.5	31.5	31.5
Morgan	—	—	29.6
Irving	28.6	24.7	24.7
Citibank	26.0	28.0	31.0
Per-barrel revenues (dollar/barrel[2]):			
Levy	10.00	12.00	14.65
Morgan	—	—	13.25
Irving:			
A	11.00	12.87	15.72
B	11.00	10.00	7.00
Citibank	11.30	11.20	9.10
OPEC total revenues (billion dollars):			
Levy	93	138	168
Morgan	110	125	143
Irving:			
A	119	116	141
B	119	90	63
Citibank	107	114	103
OPEC imports (billion dollars):			
Levy	58	88	164
Morgan	65	108	227
Irving	76	119	215
Citibank	79	105	146
OPEC current surplus (billion dollars):			
Levy	47	73	47
Morgan	57	40	−56
Irving:			
A	64	34	−17
B	64	8	−106
Citibank	36	30	−7
OPEC cumulative surplus (billion dollars):			
Levy	122	264	449
Morgan	137	231	179
Irving:			
A	149	234	248
B	149	208	22
Citibank	102	169	189

[1] In some cases the figures given for the different authorities are not strictly comparable. But these discrepancies do not seriously affect the comparison.
[2] The Irving and Citibank data are prices, not per-barrel revenues. The levy figures assume a payments lag.

Note: All value figures are in current dollars, not dollars of constant value.

Among three of these authorities—Levy, Morgan and Citibank—there is reasonably close agreement about the likely volume of OPEC oil exports in 1980. The estimates range from 29.6 to 31.5 million barrels a day. The Irving Trust, on the other hand, projects a low figure of 24.7 million b/d for 1977 and each subsequent year. The main disagreement relates to the other two basic factors, the level of per-barrel oil revenues, and the magnitude of the OPEC countries' imports of goods and services from the rest of the world. (See table.)

The revenues figure is the most unpredictable of all, since it depends on the ability of the oil exporting countries to continue operating a cartel capable of holding prices far above the free market level. On this point Mr. Levy may be regarded as a pessimist-looking at the question from the importers' standpoint: "We believe it is premature to assume now that OPEC will be unable to maintain substantial stability of real oil prices through periodic increases in their current oil prices." So he puts in a figure of $14.65 as his forecast of per-barrel revenues in 1980, which compares with a figure of $10.00 for 1975. Citibank, on the other hand—if we take its "central scenario"—thinks that oil prices will peak out at $11.80 in 1976 and could have fallen to $9.10 by 1980. Irving offers two alternatives, a gradual rise to $15.72 or a fall to $7 as the desire for higher revenues leads to keener competition among oil exporting countries.

So far as the OPEC group's imports of goods and services are concerned, these will certainly increase faster than oil exports. But here again Mr. Levy's study is not so optimistic as some of the others. He envisages a steady progression from $58 billion this year to $164 billion in 1980. Difference of definition affect the comparison somewhat—and probably differences in the assumptions made about the rate of inflation—but the Morgan and Irving studies respectively project estimates of $227 billion and $215 billion for OPEC imports in 1980, whereas Citibank puts in a low figure of $146 billion.

INDIVIDUAL COUNTRIES

No one can pretend to know for certain whether the financial imbalance between the OPEC group and the rest of the world will have disappeared in five years time. But in view of the western democracies' innate tendency toward complacency it might be as well if the policy decisions of the main oil importing countries were based on the assumption that Mr. Levy's projections are the most realistic and that the oil importers as a group will still be running a balance of payments deficit with the OPEC group in 1980.

In any case, even the achievement of an overall balance between the two groups would not mean that the problems now besetting individual countries would fade away. Just as the surplus oil money tends to be attracted to a few safe havens, so the expenditure of the oil exporters on imports of goods and services tends to be concentrated on a relatively few well-placed industrialized nations. The payments deficits of the less-favoured oil importing countries—and especially of those that are not industralized—thus have to be covered by more complex trading adjustments or by continued borrowing. In other words, the complicated arrangements for recycling the oil dollars (largely through the IMF oil facility and the OECD "safety net") are likely to be needed for quite a long time to come.

On the side of the OPEC group too, overall balance will certainly not balance the accounts of individual countries. Some of the countries will certainly still be in a position of surplus by 1980, whereas others—Algeria, Indonesia and Iran?—will probably be running substantial deficits. Pressure from them to expand their oil exports in order to earn more revenues would correspondingly reduce the exports of other

members, notably Saudi Arabia. Indeed, it is evident that if OPEC's price-maintenance policy is to be effective Saudi Arabia will have to carry a steadily increasing burden of shut-in capacity. If the leaders of that country were to tire of this role, the OPEC cartel would be in danger of immediate collapse.

A final comment on the question of OPEC's unspent balances seems to be called for. As was pointed out recently by a U.S. Treasury official, Mr. William H. Witherell,[3] the real burden imposed by OPEC on the rest of the world is not the financial upheaval that has necessitated the recycling of surplus oil revenues. The real cost is first the transfer of wealth to the oil exporting countries and secondly the heavy adjustment costs arising from intensified inflation, frictional unemployment and accelerated capital obsolescence as the oil importers adjust to the drastic change in relative prices. It is those real costs rather than the relatively short-run financial problems that cry aloud for the development of viable energy policies in the oil importing countries.

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[3] In an address entitled "The Recycling of Oil Revenues" given before the International Committee Seminar of the Financial Executives Institute in New York. Mr. Witherell is Director of the Office of Financial Resources, U.S. Department of the Treasury.

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The Coming Crack in OPEC

(By Richard N. Farmer*)

In late 1973, the Organization of Petroleum Exporting Countries (OPEC) oil cartel roughly tripled the price of crude oil, from a range of $2.50 to $3.50 per barrel to a range of $10 to $12 per barrel. A further price increase of about 10 percent was agreed on by cartel members in September 1975.

One immediate result in this price increase was the dramatic increase in foreign hard currency reserves of all OPEC nations; another was an unprecedented energy price increase for all importers of crude oil and refined products, being in petroleum. This is understandable when we realize that real energy of payments problems caused by this price increase created major economic problems for most Western nations, most notably Italy and Great Britain.

The success of OPEC is unprecedented for the poor, non-Western countries which, in 1960, had formed a country cartel in oil, but had done little with the cartel economically until 1973. For 2 years, these 12 previously poor nations have successfully held up oil prices, and have forced consuming nations to pay them. This success has generated major interest in other poor countries in developing other types of raw materials cartels in such commodities as copper, tin, coffee, bananas, and many other products.

OPEC success has caused major energy policy changes and thoughts of change in most affluent, energy intensive countries. To date, such thinking has not produced many clear-cut results. Energy prices have, of course, risen sharply, and consumption of all types of energy has stagnated in affluent countries. Before 1974, consumption had risen from 5–10 percent per year, with most of the gains being in petroleum. This is understandable when we realize that real energy costs declined from 1950 to 1974. Real prices were only 60 percent of 1950 levels in 1972. The new price increases, as pointed out by OPEC members, have only restored traditional energy costs. We have heard much criticism of Americans buying gas-guzzling cars and otherwise wasting energy, but Americans were being very logical in doing this—petroleum products were actually cheap and became cheaper from 1950 through 1974.

After 2 years of planning new self-sufficient energy policies in the United States, we now import 35 percent of our petroleum. At the start of the crisis we imported 30 percent (so much for careful planning and close government control).

A critical question for all consumers and producers is whether the OPEC cartel will hang together. If it does, then we can look forward

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to $13 to $16 per barrel oil prices (and similarly high prices for substitutes, such as coal, natural gas and atomic power). If the cartel falls apart, then oil prices could go as low as $2 to $6 per barrel. If that happens, and if we have, in the meantime, invested $100 billion over the next 10 years in high-cost alternative energy, we are in trouble. But if oil prices stay high, and if we don't develop options, then we also are in trouble. The real key to energy planning is the price of oil over the next 10 years, which is why OPEC is so important.

KEY FACTORS

To see how the game might be played out, we have to consider the critical factors affecting oil pricing in the next 5 to 10 years. Nine major points must be examined.

PILING UP DOLLARS

Some OPEC countries can use all the foreign exchange they can get, while others generate huge surpluses. Iran, Nigeria, Indonesia, Ecuador, and possibly Venezuela and Algeria can spend the extra money they get. These countries have large populations, and some (Iran, Iraq and Venezuela) are more advanced in terms of skilled people than the others. They have the absorbative capacity to spend the extra money.

Other OPEC countries generate surpluses. Saudi Arabia has by far the most oil and the most reserves, both money and oil, and it will pile up tens of billions of dollars. Libya, Kuwait, the Persian Gulf Emirates and Qatar also will pile up reserves. These countries can rather easily cut production without suffering foreign exchange problems in the short run. This point is critical, because if prices are high, production increases are low or nonexistent. Given production capacity increases, someone has to cut back. The classic cartel dilemma is who cuts output, and if OPEC can get some (or all) of its members to cut output without pain, then the chances of high prices being maintained are high.

SAUDI ARABIA'S ROLE

Saudi Arabia is the key to the whole problem. This one country probably has over half the oil reserves of the whole world (oil men lie a lot about reserves, so the true world figure is only an estimate, but there are rumors about fields in Arabia which are bigger than the known ones, which are almost half the world's total). If the Saudis decide to maintain or expand output, OPEC falls apart.

Saudi Arabia has its own problems. A major one is that its potential military enemy, Iran, is just up the Gulf and also is an OPEC member. There appears to be a subtle shift in the Saudi winds which indicate a desire to make sure that America will back them if the Shah of Iran gets nasty. A country of 4.5 million unskilled people, just coming out of the dark ages, with a land area a third the size of the United States, is a country that cannot stand alone militarily for very long. But Saudi policy is a complex mix which includes Arab politics, Arabian Gulf intrigue and royalty vs. populism. Forecasting just how the Saudis will play the game is not easy, and how they might be pressured by certain groups is also unknown.

PRODUCTION CAPACITY

OPEC production capacity has increased steadily since 1973; this is the result of programs started before the price increases. Apparently, oil productive capacity in the world now is rising at a 10 percent rate, while world consumption is stagnant or is increasing at less than 1 percent. Hence, idle capacity is steadily increasing. Some major OPEC producers (most notably Saudi Arabia) have continued with expansion plans set up before 1974.

At present, there are about 12 million barrels per day of shut-in global oil capacity. This is capacity which could be brought into production merely by opening valves, and has nothing to do with undeveloped oil fields. Most of this capacity is in the oil producing OPEC countries that don't need the money, most notably Saudi Arabia, the Persian Gulf Emirates, Kuwait and Libya, but if OPEC capacity steadily increases while production stagnates, then other OPEC states will have to hold idle capacity as well.

Further evidence of the huge oversupply of oil is the surplus of oil tankers. This capacity also is increasing rapidly, as tankers ordered before price increases are being completed. If consumption suddenly increased, there would be plenty of transporters to bring oil to consumers.

NEW PRODUCERS

There will be a sure 5 million barrels per day of new oil output coming on stream between 1976 and 1980 from non-OPEC countries. The three major new producers will be the North Sea fields (belonging to Norway and Great Britain), Red China (an unknown increase here, but in recent years there has been very rapid growth), and Alaska. This is certain new output (not new discoveries), for the major work to get the oil to refineries is well along.

If world consumption stagnates, then these new supplies will replace OPEC supplies, putting further pressure on the cartel to cut output. Members will have to decide who cuts and when. Western Europe will use North Sea supplies; Japan will happily buy Red Chinese outputs; and the United States will use the Alaska output (possibly making complex export tradeoffs for foreign oil in the process, given Alaska's location, but the net result will be a reduction in demand for OPEC oil).

NATIONALIZATION

Virtually all OPEC countries have either already nationalized, or are in the process of nationalizing, the foreign, Western oil producing companies within their borders. Historically, the huge multinational oil companies could make profits on crude and break even or lose in downstream operations. Increasingly, however, the OPEC countries' national companies are getting the crude oil profits. This places more emphasis on downstream profits, along with more arm's length bargaining postures by all those who buy crude from OPEC. If you are just a buyer, then there is no particular advantage in having high crude prices. Moreover, the American diplomatic interest

used to be in protecting multinational oil companies first and American consumers second; now the consumers come first, especially with American ownership vanishing from OPEC countries.

The critical point here is that if the United States and other consuming countries become arm's length buyers of crude, possibilities of playing off one OPEC country against another increase. OPEC countries, instead of having American companies on their side, may find that they have to play alone.

Since this nationalization process is not complete, and since it is not yet clear what special access rights American and European producers may have to OPEC crude, it is not certain if this will be a major factor in the next 5 years. Both Saudi Arabia and Abu Dhabi, being pretty clever, have kept the American and European producing owners involved, at least in part. But more reserved bargaining and keen interest in lower crude prices may have a major effect in the next 5 years.

One key factor here is the supply of royalty crude, which is crude made available by the producing company to the Government involved. The governments have to sell the oil, and they often do this to the lowest bidders. So far, more or less, the countries have refused bids below OPEC minima, but in the future, under serious balance of payments pressures, they may have to make some critical pricing decisions.

ENERGY OPTIONS

Plenty of energy options are available to nonoil producers, but none are likely to be much cheaper than the oil equivalent of $12 to $20 per barrel in the next 20 years. Moreover, all energy options will require multibillion dollar investments in new facilities. This leads to an awkard problem: if a country invests heavily in such energy sources, and then oil prices drop rapidly, the country is in a high-cost energy bind for decades. It was this sort of thing that last year led Henry Kissinger to propose a guaranteed oil price floor of about $6 or $7 per barrel to OPEC, in return for guaranteed supplies. OPEC refused the offer.

This problem also explains why we have such an energy policy dilemma in the United States. We can develop alternatives. But, then, suppose oil prices fall to $4 a barrel? Japan, West Germany and other major oil importers without domestic supplies would happily buy the cheap oil. They would also out produce us in all energy intensive production for the next 20 years, unless we also accepted the cheap oil. But if we did, we could kiss Mr. Rockefeller's $100 billion invested in a Government-owned alternative energy corporation good-by—it would be a lost asset. Moreover, we would lose additional billions in high-priced Alaska crude, recent coal investments (with oil prices down, coal would follow), and much atomic power investment.

CONSUMPTION CUTBACKS

Available evidence points to a very limited growth in petroleum consumption, even if the world economy rapidly comes out of its present recession. We have barely begun to develop energy-saving strategies, and already consumption growth has been cut sharply. So

far, only obvious steps have been taken, such as raising gas prices, cutting heat in unused buildings, turning off lights at night and improving insulation. However, the next generation of American (and European) cars will be much more economical than the last: new buildings will be designed to save energy; and energy-saving production processes will be built into new productive capacity. As one example, an average family can save about half the energy it now uses by reinsulating the house, shifting to smaller cars, and substituting new energy-saving appliances for ones currently in use. If retail energy prices rise, 80 million American households will continue to do just these things, and energy use per capita may decline steadily, even though living standards stay fairly high.

Since all affluent countries are in the same fix, they are doing similar things. Poor countries without oil, such as India and Pakistan, are cutting back even more, since they just can't afford the imported energy.

NEW DISCOVERIES

A number of possible new major oil discoveries exist, particularly in offshore areas. In recent months, new fields have been discovered in such diverse places as in the Mediterranean off Spain and in the Bay of Bengal off India. South Vietnam may have some lush deposits (and Communist countries always need foreign exchange, so they will sell if they can), and other intriguing possibilities exist. Brazil is beginning some major exploratory work, and the Soviet Union already has huge known (but unexploited) reserves. If any of these new discoveries turn out to be major and quickly developable, then even more new output may come onstream by 1980. But the best guess is that they will come onstream by 1985 or even later (it takes years to develop an oil field).

The widespread predictions that the world will run out of oil in about thirty years were made based on a consumption rate increase of about 7–10 percent per year. With present stagnation, the known oil reserves of the world will last well into the next century, perhaps to 2050. With probable new offshore discoveries, the depletion time moves to 2100, or even later. This suggests that there will not be any absolute shortage of petrolem ever, since it is widely forecast that by 2000 or 2010, we will be far enough along with alternative and cheap options that the problem will be academic. There is a glut of oil, not a shortage, and the best guess is that the glut will last as long as we want oil.

PRICING VARIABLES

Oil is not oil is not oil. Laymen assume that one barrel of oil is the same as any other barrel. Oil men patiently try to explain that sulfur content, gravity, location and other factors make oil a very complex commodity indeed. A barrel of 35 gravity, 0.1 percent sulfur crude in Arabia is not the same thing as a barrel of 0.2 percent sulfur content, 22 gravity crude in California.

This point is critical for pricing, since oil does not have one price, but literally ten thousand prices, if not more. A supplier can discount for various factors or add on for other features. As a result, a producer can change price without changing price. He can discount more or

less for sulfur content or transport costs, or perhaps get a premium for certain gravities. Moreover, the producer can play games with credit and other sales conditions as well. Ninety-day credit extended to buyers in a world of 10 percent money yields a very different price than the same price cash on delivery. If you really want to get prices down, just shift these other variables, and then claim that nothing has changed.

Such pricing behavior is already very noticeable in OPEC, but so far only in minor items. For instance, Abu Dhabi reduced its crude prices slightly to reflect lower demand for its low sulfur crudes. Historically, these had been premium priced, because of pollution concerns in consuming countries, but now many refineries have sulfur scrubbing equipment, so this feature is not worth much. When Abu Dhabi had a huge falloff in order in 1974, they reduced the sulfur-free premium to get back business. Other OPEC countries have also played this game, but, of course, prices have not been reduced.

THE 5-YEAR SCENARIO

Sometime in the next 5 years, a major OPEC country will get into deep balance of payments trouble. With new oil coming from non-OPEC sources, and with world demand stagnant, OPEC will have to cut production. OPEC will meet and assign the cuts, with much argument. The troubled country, however, will simply have to have the foreign currency. (Already, several OPEC countries—Iran, Indonesia, Nigeria—are approaching this crisis.) So the country will look for options. A smiling Japanese or German or American or Lebanese—take your pick of heroes or villains—will approach those in the country that sell royalty crude, a huge purchase order in hand. But, unfortunately, his clients cannot pay the posted OPEC price. Now, if a suitable discount can be arranged . . .

The country will bite. It will shuffle some discounts and credit terms, so that the real net price is perhaps a dollar a barrel below OPEC minima, and make the deal. Oil production will not fall in this country, but it will fall fast in another OPEC state. This second state, also having serious balance of payments troubles, will have to get some foreign exchange. A smiling buyer will approach those in the country that sell royalty crude . . . Within a year, the price could be down to $6 a barrel. But, of course, no one would reduce the price! OPEC insists on $16 per barrel, but by the time the discounts are figured the going rate is $6.

With OPEC marginal costs ranging from perhaps 10 cents a barrel in Saudi Arabia to $3 in Venezuela, there is a lot of downside room. Indeed, the most likely scenario is not for high energy prices, but perhaps worse, for highly unstable prices. Consider the follow-on to the above scenario. OPEC is troubled and afraid of falling apart, so it reforms, renegotiates, and succeeds in getting the price back to perhaps $12 per barrel. But then some new non-OPEC supply comes on the market to push OPEC output down, and the first scenario is repeated. We could very well have wildly fluctuating prices in critical energy which, from both government and corporate planning points of view, could be more disturbing than just high prices.

How might the U.S. Government react to rapidly falling OPEC prices? The most likely result would be to keep U.S. prices high. First, this strategy might allow for stable long-term planning of expensive options. This point would be even more critical if the Government is deeply into energy investments in high cost options, along with many private firms. Second, there is still huge high-cost oil production in the United States, and local companies have been very successful in the past in getting protection from cheap foreign oil (witness the oil import quotas from 1958–73). Third, many private firms are deeply into such costly options as coal and atomic power, and they need protection, too.

But Japan and West Germany will buy the cheap oil. It is likely that they will use it only for industrial purposes, since virtually all governments of affluent (and poor) countries have violent antiauto biases, and it is highly unlikely that any will allow gasoline prices to fall. But petrochemicals, fertilizers, aluminum, glass, steel, and other industrial items are a different story.

Since the United States is such an energy intensive economy, this scenario will most likely assist in keeping growth slow. But in Government views, stability is more important than low costs. Moreover, if oil prices go back up next year, this view could be right. About the only consolation energy users have is that the most likely scenario is for energy prices in the next 20 years to behave as they did in the period 1950–73. That is, they may gently decline in real terms as other prices go up faster. Maybe this will give us some economic encouragement, but the most likely development of really cheap energy lies 20 or more years out, and the new source will not include hydrocarbons. We will have to wait for technology to give us such things as fusion.

What are the odds that all of this will happen? No one could assign any precise probability, but I would bet there is a a 60-percent chance that some major crack in OPEC, accompanied by significantly lower petroleum prices, will occur within the next 5 years. The probability in the next 2 years is perhaps 20 percent, rising as the years (and new output) goes on. Any takers?

Where OPEC Aid Is Going in the Third World

(By Maurice J. Williams*)

During the past 2 years OPEC countries have become important donors of economic assistance to non-oil Third World countries. There has been widespread interest in these aid efforts, with one major British newspaper stating that "never before have nations been so generous with their wealth as the OPEC countries are now showing themselves to be." It is alleged by others, however, that aid from the oil exporters has been inadequate, well short of the billions of dollars that the oil price increases have cost non-oil developing countries. Further, it is claimed that OPEC assistance chiefly goes to a few select countries. What are the facts about OPEC aid? How important is it in helping the non-oil Third World?

Before the dramatic oil price increases of late 1973, only Saudi Arabia, Kuwait and Libya were major OPEC providers of economic assistance, and over four-fifths of their aid was in the form of budgetary grants in support of the defense burden of the "front line" states of Egypt, Syria and Jordan. This general budgetary support averaged about $400 million annually during 1970–73.

ARABS MAIN RECIPIENTS

The aid of OPEC countries for direct economic development, on the other hand, was relatively small, averaging about $80 million annually during 1970–73. Saudi Arabia, Kuwait and Libya again were the main donors, but other OPEC members also contributed. Again this aid was directed largely to Arab States, along with small and sporadic aid for those African countries which supported Arab diplomatic interests. OPEC members did not contribute appreciably to international agencies, with the exception of Kuwait which contributed to the World Bank IDA fund.

While OPEC aid has expanded considerably during 1974–75, it has followed essentially the selective pattern adopted before 1974. The bulk of OPEC aid continues to go to Arab and Moslem recipients—and supporting assistance for the 'front line' states is still the largest part.

HIGHER OIL REVENUES

With the fourfold increase in oil prices, the nominal value of OPEC members' oil exports rose from $36 billion in 1973 to $113 billion in 1974, and non-oil developing countries accounted for about $16–$17 bil-

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Source: *Euromoney* (London), March 1976, pp. 65–71.

lion of the higher oil revenues. Their increased oil bills were about $12 billion in each of the 2 years 1974 and 1975—of which almost $2 billion in increased costs annually was faced by poor countries with per capita incomes of less than $200.

The success of the oil-producing countries in achieving a uniquely sudden and large transfer of purchasing power in 1974 through their own collective action made a profound impression on nonoil developing countries. Those with cumulative problems of poverty, high unemployment and sluggish development programs—mostly in Africa and Asia—were seriously affected by the major price increases. But many middle-income developing countries were not immediately hurt. They had benefited from high commodity earnings and their economic position was relatively strong. Also, a number of Latin American countries (Argentina, Colombia, Bolivia, Mexico and Peru) are not dependent on imported oil. Hence, while some oil-importing Third World countries were quick to identify higher oil costs as one of their serious problems and to press for economic relief from OPEC, others saw OPEC as a rôle model which they would like to emulate and came to the defense of OPEC price policies.

Despite broad support from the non-oil Third World, OPEC has found it difficult to adopt a common policy to help developing countries with their increased oil bills. OPEC has consistently rejected proposals for selective pricing of oil or 'oil aid grants'. After extended discussions, an OPEC development fund was agreed upon in January 1976 for 1 year. When ratified by OPEC members, this fund will provide $800 million in interest free loans to developing countries—based solely on their economic need rather than on political considerations.

OPEC disbursements to the Third World

	In millions
Direct concessional aid	$2,300
General support for:	
Arab States, Pakistan and Bangladesh	(1,700)
Oil credits, mostly to Sudan and India	(350)
Loans and grants to other countries	(250)
Aid to multinational funds	400
Nonconcessional flows [2] (mostly World Bank bonds)	1,800
Total disbursements in 1974	[1] 4,500

[1] Excluded is $1 billion in 1974 which was subscribed by OPEC to the IMF oil facility, and was drawn by developing countries, but by normal IMF practice is not regarded as a resource transfer.

[2] Complete information is not available on disbursements by semiprivate banks and investment institutions.

To date, the major aid actions of OPEC countries have been to expand supporting assistance for countries politically aligned with them and to establish a number of special funds to finance development projects.

Beyond the estimated $4.5 billion of total flows in 1974, a further $6.2 billion was committed to regional funds, development projects

and commercial investments. Thus total actual flows and commitments to non-oil developing countries were $10.7 billion in 1974. OPEC commitments continued in 1975 at approximately the same level. Disbursements accelerated somewhat in 1975 and probably exceeded $5 billion.

Concessionary aid in 1974 from OPEC donors of $2.7 billion is large in relation to their GNP, averaging 1.6 percent, with Nigeria excluded. In comparison, concessionary aid from OECD donors was $11.3 billion in 1974, which averaged only 0.33 percent of their combined GNP.

MAIN DONORS

Saudi Arabia is by far the largest OPEC donor with net disbursements in 1974 reaching almost $900 million. The other most important OPEC donors are Iraq, Iran and Kuwait, all with aid disbursements in the vicinity of $400 million. In terms of GNP, Qatar leads with 5.5 percent, followed by Iraq and the United Arab Emirates (around 3.5 percent), Quwait (2.9 percent), Saudi Arabia (2.5 percent) and somewhat more modest ratios for the other countries.

While about half of OPEC aid is on a grant basis, OPEC loan terms are relatively hard, averaging a 30 percent grant element.

The main feature of OPEC aid has been the high share for general supporting assistance, mostly to Egypt which has received about half of the total aid flows of Arab donors in 1974–75 in response to Egypt's acute budgetary and economic needs.

Hence, direct OPEC assistance is characterized by a marked geographic concentration. Almost two-thirds of the direct aid disbursements of the past 2 years have gone to Egypt and Syria—both of which are net exporters of oil. Another 25 percent went to Muslim states, leaving less than 10 percent for non-Muslim countries. Black African countries, both Muslim and non-Muslim, have not found that OPEC aid is as helpful as they had hoped, although the level of OPEC commitments to Black Africa went from about $85 million in 1974 to $200 million in 1975.

The skewed geographic distribution of aid has been paralleled by increasing donor concentration. Saudi Arabia and Kuwait committed almost two-thirds of OPEC aid in 1975, compared with about half in 1974. In contrast, Iran, Libya, Qatar and Venezuela have reduced their aid in 1975 by about half of what it was in 1974.

A large part of the new commitments made in 1974 and 1975 have been slow to result in actual resource flows. This is due to the preference of OPEC donors for ploughing large commitments into new development funds and for project assistance, as distinct from general supporting assistance, for countries not in the "front line" of confrontation with Israel. For example, almost $1 billion was committed during 1974 to the Islamic Development Bank, Islamic Solidarity Fund, and Arab Bank for Economic Development in Africa—none of which made disbursement in 1974. OPEC donors have a preference for multilateral agencies which are responsive to their policy direction.

FEW DISBURSEMENTS

Understandably, few of the project commitments made in 1974–75 have been disbursed. A striking example is the experienced Kuwait Fund which in March 1974 increased its paid-up capital to $1.35 billion and extended its lending operations for the first time to non-Arab countries. Despite expansion of its commitments to new projects, the net transfer of resources from the Kuwait Fund has been almost nil, since repayments on old loans have been almost as large as new disbursements.

Saudi Arabia, as it expands its aid operations through the newly established Saudi Arabian Development Fund with capital of $2.8 billion, favors commitments increasingly for projects. The United Arab Emirates and Qatar also are placing emphasis on project assistance.

As a result of these policies, OPEC is not as responsive as it might be in helping with the severe deterioration in the balance of payments of the nonoil third world. Although OPEC has contributed the bulk of the increased flow of long-term financing resources to developing countries in 1974–75, this increased OPEC flow is equivalent to somewhat over a third of the additional financing requirements of the nonoil third world due to structurally higher oil prices. The OPEC aid effort is even less effective in this regard when allowance is made for the fact that much of OPEC aid is directed to Egypt and Syria, which as mentioned above, are net exporters of oil.

OPEC investors have expressed increasing interest in placing investment capital in non-oil-developing countries, but so far the scale of direct investments has been small. While OPEC investors look favorably on projects for oil refining, marketing, and related facilities, most of their joint ventures have been for banks and investment projects located in principal financial centers, with worldwide rather than strictly developing country interests.

GEOGRAPHIC IMBALANCE

It is well to keep in mind that the surplus capital position of the OPEC countries is only 2 years old and that many of the OPEC institutions being used for channeling their financial assistance are still fragile and new. After allowing for this, the fact remains that OPEC contributions to the balance-of-payments gap of the nonoil less-developed countries—a gap to which the oil price increase contributed significantly—fall far short of the need. Resource transfers of about $4.5 billion in 1974, and somewhat higher in 1975, are important, but the geographic concentration of OPEC capital assistance does little for many of the less-developed countries of the nonoil third world, who are now on the "front line" of those who must receive additional help if they are to maintain their development programs. The need to broaden OPEC aid programs geographically and to accelerate disbursements is recognized by most OPEC countries.

The Arab OPEC countries will continue to have major surpluses in the coming decade, and their total reserves will accumulate for many years to come. The mobilization of savings which this represents provides a unique opportunity to direct more capital to the nonoil third world. OPEC countries might consider means to help non-oil-developing countries to cover in full, or in substantial part, their higher oil bills, at least for a transitional period of several years.

OPEC CONCESSIONAL AID IN 1974

[In millions of dollars]

	Commitments	Disbursements
Algeria	95	45
Iran	1,270	400
Iraq	525	465
Kuwait	680	360
Libya	295	115
Qatar	180	110
Saudi Arabia	2,100	880
United Arab Emirates	550	265
Venezuela	110	45
Nigeria	11	10
Total	5,726	2,695

A New Era of Stability in Energy Economics

(By Ahmed Zaki Yamani*)

The subjects I want to deal with are some of the economic aspects of the world energy situation. I would like to express the views of my country, as a leading oil producer, on some of the recent developments in the energy situation; developments which have been misinterpreted thereby leading some people to arrive at erroneous conclusions and hold beliefs that are based more on conjecture than actual facts. I hope I shall be able to remove some of the ambiguities that have shrouded the real facts.

The world energy sources, and in particular petroleum, have gained such importance that no economic life can be conducted without their availability. Energy permeates every level of modern human behavior, and virtually every economic activity, to such an extent that production of goods and services is inconceivable without it, and thus it may be likened to the factors of production, the main prerequisites for economic activity. The expenditures and revenues associated with energy give a revealing picture of its economic importance in today's world. Investment in energy production and distribution amounts to about $100 billion annually. Its value in international trade is about $120 billion annually. The revenues it generates for governments of producing and consuming countries as well as operating companies is in the vicinity of $200 billion annually. Energy, and oil in particular, transcends all other raw materials in that it has gained such importance as to make it directly exchangeable for wealth and technology, which are among the ultimate products of human endeavor. Economists once described technical know-how as a separate factor of production, in conjunction with land, labor, and capital, because of its great importance to economic activity. By virtue of the even greater importance of energy, we can also consider it as belonging to the same rank and as commanding returns of proportionate magnitude. Another indication of the importance of energy is the fact that the yardstick for measuring the degree of economic progress of nations is no longer limited to per capita income but includes per capita energy consumption as well.

However, the purpose of this article is not to devise a new economic theory; this may be left to those engaged in the current controversy over the adequacy of the existing world economic order. Our purpose is to examine the salient features in the developments in the oil sector of the energy situation. Oil contributes to more than half of the world

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energy requirements, and it is therefore appropriate for me to examine the prospects of its supply and demand in the light of events that took place over the last 2 years.

The factors which determine the supply of oil are the following: world oil reserves both existing and potential, the price of oil, the requirements of the producers and consumers of oil, and the rate of development of alternative sources of energy.

SUPPLY DETERMINANT: WORLD OIL RESERVES

In 1974, world ultimate recoverable oil reserves in discovered fields amounted to 740 billion barrels. Of this total, 636 billion barrels belong to the free world. The Middle East contains 67.6 percent of this amount, and Saudi Arabia alone can claim 27 percent of the free world total. These figures, arrived at in recent reserve estimates presented at the Ninth World Petroleum Congress, are, however, substantially less than the reserves expected to be discovered, which are estimated at 963 billion barrels. Out of this total, 613 billion barrels will be in the free world, mostly in offshore areas. We believe that 100 billion barrels or one-sixth of these total reserves whether onshore or offshore, will be discovered in Saudi Arabia. In fact, we believe that if we intensify our efforts, we can double our expected additional reserves. Thus, Saudi Arabia alone contains more than 22 percent of total free world ultimate recoverable reserves, taking into consideration both existing fields and the undiscovered areas.

The recoverable reserves from undiscovered potential in the free world exist mostly under waters 600 to 6,000 feet in depth. The necessary technology for their extraction, yet to be developed, will consequently be very costly. It is well known that the extraction of oil from shallower waters like the North Sea is economically attractive because of prevailing prices. At greater depths and generally more difficult conditions, much higher prices ought to prevail if the oil is to be economically exploited. Free world existing reserves together with undiscovered reserves amount to an impressive 1,249 billion barrels. However this figure must not be viewed in isolation from the relevant facts. It should be looked at in the perspective of future world consumption.

It is estimated that Free World oil consumption in 1975 will reach about 17 billion barrels. At this rate, free world reserves both discovered and undiscovered will be sufficient for 37 years. Assuming that consumption will rise at a rate of 3.5 percent annually through 1980, 3 percent between 1981 and 1985, 2.5 percent between 1986 and 1990, and only 2 percent thereafter until 2000, the free world will by then have consumed 642 billion barrels, an amount equivalent to the ultimate recoverable reserves prevailing at present. The remaining reserves then will be sufficient to cover 18 years consumption at a rate of 88 million barrels per day or 32.2 billion barrels per year. But if consumption continues to grow thereafter at a rate of 1.5 percent through the year 2010, the remaining reserves will amount to 220 billion barrels by that year which will be sufficient for only 6 more years. To avoid such a grave situation, it is imperative for the world to reduce production of conventional crude by the late 1980's. It remains to be seen whether by then synthetic crudes will be capable of filling the gap.

THE PRICE IMPACT ON SUPPLY

Moving to the second factor which influences the supply of oil—that is, prices—we find that the oil-producing countries have been subjected to constant criticism since the time they adjusted their prices after a quarter century of price stagnation. Setting aside for the moment the impact the sudden price adjustments had on consuming countries' economies, it has been calculated that, applying world inflation based on the GNP price index of OECD countries to the price of oil since 1948, the price for 1974 should have been more than $12 per barrel, a figure which exceeds the prevailing prices as of June 1975 by $1.50 per barrel.

The adjusted price levels effected in early 1974 provided the producing countries with the incentive to raise their crude oil production during the second quarter of 1974 by 6 million barrels per day. This indicated the supply price elasticity which characterized this commodity, and signified the willingness of the producers to make more oil available at the proper prices. The production cutbacks which followed the second quarter of 1974 came as a result of a decline in demand and not because of the desire of the OPEC countries to raise prices. Prevailing prices not only stimulate OPEC oil supplies but they have also grown palatable to the consuming countries because they tend to increase the pace of producing alternative sources of energy.

SUPPLY AND PRODUCER/CONSUMER NEEDS

This brings into sharp focus the third factor which determines supplies, that is, the producers' and consumers' requirements. Historically, and excluding the period from October 1973 through March 1974, the producing countries have met the consuming countries ever-increasing oil requirements. They are still meeting those requirements as determined by the free interplay of market forces, at least from the supply side. On the demand side, consumption levels have recently been artificially depressed below natural demand levels, thereby impeding the natural movement of the market forces from that direction. Despite the fact that consuming countries' governments have recently resorted to restrictive oil import polices, OPEC countries did not take collective action towards commensurate restrictions in production, and they are not likely to do so.

If it appears to the observer that recent production cuts in certain producing countries are the result of a predetermined policy, that is an illusion. Supply has always been a function of demand. Oil production can cope with demand fluctuations whether seasonal or cyclical because of the quantitative flexibility oil enjoys over other minerals; at times of low demand no stockpiling is necessary and oil will, therefore, be withheld automatically in its natural reservoirs. Today supply is low because demand is low; therefore oversupply does not exist in reality although suppliers may be willing to increase production at prevailing prices if demand permits. If demand does not increase, suppliers will not be forced to cut prices to dispose of accumulated costly stockpiles, as would be the case of other raw materials.

Judging by the requirements of OPEC member countries as a basic determinant of supply, it can be stated that these requirements are

more than covered at current production levels. This is substantiated by the findings of a study undertaken by Morgan Guaranty Trust Company of New York which shows that OPEC countries will collectively enjoy a surplus that will last for at least 5 years. The estimated accumulation of OPEC surplus funds will, according to this study, reach a peak of $248 billion in 1978. Consequently, OPEC countries should not be expected to resort to price cutting in order to increase sales since their projected total revenues will exceed their total anticipated expenditures. The financial gap which exists between their expenditures and revenues will suffice for a number of years to provide a hedge against pressures which may be brought to bear upon them to compete with each other for the extra barrel of oil. This strong position of the producers is consolidated by the fact that the market is not likely in the near future to grow to such an extent as to precipitate undue competition among themselves for additional sales. But one conclusion can be drawn from these facts—that under prevailing price levels the oil-exporting countries will increase supplies only when demand rises.

The OECD and its offshoot, the International Energy Agency (IEA), may try to measure oversupply in terms of the surplus producing capacity prevailing in OPEC member countries, estimated now to be in the order of 6 million barrels per day. Basing their predictions on this premise, the IEA proceeded to conclude that this so-called oversupply will create such severe competition among OPEC countries that will set in motion a chain of price-cutting which will force the world oil price to low levels. And as if to create a psychological impetus for OPEC states, the IEA came up with the idea of a price floor, which ostensibly aims at protecting our price level from falling below a certain minimum, but which we view as a move to force prices down to the level desired by the consumers.

I would like to reemphasize the fact that supplies should not be determined by producing capacities but by the producers' requirements. These requirements at present do not warrant except a fraction of current production levels. For example, although Saudi Arabia has authorized a production level of 8.5 million barrels per day, its requirements do not warrant more than 3.5 million barrels per day. In other words, we are now overproducing and not underproducing as some of the consuming countries seem to believe.

Here I wish to clarify that OPEC will not reduce prices except whenever it deems such action appropriate. It is only reasonable to expect that a reduction would only come about in return for corresponding benefits provided to the producers by the consumers. Such a situation cannot be brought about by any conservationary measures taken by the consumers. This is because the ability of the producers to cut back production whenever necessary exceeds by far the ability of the consumers to reduce their consumption.

ALTERNATE ENERGY SOURCES DEVELOPMENT

Oil provided about 48 percent of total world energy supplies in 1973. Oil and natural gas together supplied the world with 67 percent of its total energy requirements in the same year. For the OECD countries alone, oil accounted for about 56 percent of their total energy

supplies representing an increase of 16 percentage points over its share in 1960. The recently published OECD report predicts that oil's share in future energy requirements will steadily decline due to the price increase. At a price of $9 per barrel that share may, according to that report, reach about 43.4 percent in 1985, a figure almost equivalent to its share in 1960. At $6 per barrel, it is predicted that oil's share may reach a slightly higher level, 47.1 percent.

These predictions are based on the assumption that other sources of energy will account for a greater share in total energy supplies in 1985 if prices remain constant at existing levels. Thus, the share of nuclear and hydroelectric energy in 1985 is expected to be 16.2 percent at $9 per barrel of oil as against 12.7 percent at the early 1973 oil prices. Similarly the shares of solid fuels and gas are projected to be 18.7 percent and 22 percent, respectively, at an oil price of $9 per barrel as against 14.8 percent and 17.8 percent, respectively, under the early 1973 oil price assumption. In absolute terms, OECD oil requirements will grow from about 42 million barrels per day in 1973 to about 50 million barrels per day in 1985 at a price of $9 per barrel instead of 72 million barrels per day as originally projected under the $3 per barrel price assumption.

Oil imports by OECD, which were expected to reach about 52 million barrels per day in 1985 under the $3 per barrel price assumption, are now expected to reach 21 million barrels per day, under the $9 per barrel price assumption. Based on these assumptions, indigenous oil production is expected to grow from 13.5 million barrels daily at present to 29 million barrels per day in 1985, an increase of 15.5 million barrels. Since conventional sources of crude in the OECD areas will be capable of providing no more than an additional amount of 9 million barrels per day, it can only be inferred that the balance of 6.5 million barrels per day will be derived from synthetic crude to be produced from shale oil, tar sands, and coal.

Although it is the leading oil exporter in the world, Saudi Arabia is not apprehensive of the development of other oil resources or other alternative sources of energy. In fact, we believe that such a trend will ease the pressure placed on our country to produce more than it requires. But we also believe that the prevailing prices of oil will not be sufficiently high to induce a massive development of alternative non-OPEC oil supplies—whether conventional or synthetic—as well as other sources of energy, at scales suggested by the latest OECD studies. It was suggested by those studies that the cost of synthetic crude hinges around the $7 per barrel level. No indication was given however of the cost if synthetic crude production rises from a modest rate of 100,000 barrels per day to 1 million barrels per day or 6.5 million barrels per day as suggested by the recent report. Unlike OPEC oil, whose costs decline with higher rates of production, synthetic crude costs increase when production increases. This is due to the intolerable strains which are placed on labor and capital equipment, waste disposal, transportation, distribution facilities, and water resources as well as the social hazards that will ensue as a result of such large-scale expansion. Such costs may reach double or even triple the prevailing oil prices or the costs figures now being estimated for the development of synthetic crude.

Likewise all the other conceivable sources of energy will involve extremely high costs and lengthy time lags. Thus, for instance, the total time required for the completion of a nuclear plant is about 10 years. A plant, therefore, the construction of which commences in 1975 would only be ready for production in 1985. This leads to the conclusion that the OECD prediction of nuclear plants providing energy to the tune of 14.2 million barrels per day of oil equivalent by 1985 is, to put it mildly, overoptimistic. In order for that prediction to come true, all the nuclear plants necessary for producing 14.2 million barrels per day must be in the first stages of their construction today in mid-1975. I do not think this has been achieved.

LOWER OIL DEMAND: CAUSES AND PROSPECTS

The recent decline in oil demand came as a result of a number of factors, but mainly (1) the crude oil price increases of January 1974, (2) the recession in industrialized countries, and (3) Government policies of major consuming countries.

It is a well-known fact that the price rise of January 1974 reached, for the first time, the range at which demand became elastic. Fifteen months elapsed since that time, and there is empirical evidence now showing that the price increase of 130 percent has brought about a decline in demand of about 13 percent. This suggests that demand elasticity is about −0.1. Forecasts of eminent economists worked out a year ago indicated an elasticity of −0.25 which is a proved exaggeration. Our findings on oil price elasticity suggest that demand may continue to grow in the future, starting from a rather lower base than that which would have existed had prices been kept at 1973 levels.

This conclusion, however, is not entirely complete since the picture is somewhat blurred by the prevailing recession; therefore, we cannot ascribe the entire decline in demand to price elasticity alone. It may be assumed that had there been no recession, price elasticity would not have been so pronounced. Future demand for oil will largely depend on two main factors. The first is the rate of recovery in economic activity in industrialized countries, and the second is the rate at which other alternative sources of energy will be introduced. It should be well known that the prevailing oil price in real terms, exhibiting a decline of about $2 per barrel as compared to a year ago, cannot be singled out as inhibiting recovery. The concomitant problem of recycling largely has been resolved by the decline of the producers' financial surpluses as an outcome of reductions in oil exports and the rising absorptive capacities of oil-producing countries. The establishment of the OECD safety net, which utilizes the funds of the oil producers to a certain extent, also has contributed toward that solution.

With regard to other sources of energy, oil from non-OPEC countries—mainly that of the North Sea and Alaska—will have an increasing role toward the end of this decade. The development of other fossil-based and nonfossil sources of energy may still lag behind and will not be introduced in signficant quantities prior to the late 1980's.

On the bases of the above assumptions, it may be concluded that over the coming 5 years oil demand may grow at a rate of 3.5 percent, to 4 percent annually, that is, almost parallel to the projected rate of

growth of energy as a whole, and commencing its growth toward the end of 1975 from a base which is about equal to that which prevailed during 1973–74.

NEW DIRECTIONS IN THE WORLD ECONOMY

Having thus spoken about the main aspects of the international energy situation, I would like to conclude with a few words about the general situation of the world economy which is currently being subjected to much debate and discussion at very important levels. The Sixth Special Session of the United Nations General Assembly held in April 1974 seems to have set in motion a process that will not stop, that must not stop, until our world economy has been cured of its most serious maladies. The shortsighted complacency of a few rich powerful nations, so oblivious of the poverty and deprivation of the majority of developing countries, must not be allowed to continue unchecked. The trends in the world that can only make the rich richer and the poor poorer must be reversed. This is essential not only to alleviate the hardships suffered by the developing countries but also to insure the longevity of the well-being of the rich nations of today.

It is now universally recognized that no one country can exist in total isolation from the rest of the world and the economies of the various countries are interrelated and can effect each other profoundly. It is, therefore, imperative for the international community to seek out the inequities and imbalances, wherever they exist in the world economy, and remove them. This must be the ultimate objective of any future meetings that bring together the developed and developing countries, including the oil producers. Although the preliminary meetings held in Paris last April to examine energy and other economic matters did not achieve their objectives, there are now encouraging signs that they will be reconvened. If they are, it should be the duty of everyone who can influence them, whether directly or remotely, to do everything possible to insure their success. A successful outcome that satisfies all the groups of countries participating in those meetings is, in my view, the only hope for the world to surmount its chronic economic difficulties.

Energy, Styles of Life and Distributive Justice

(By Manuel Pérez-Guerrero*)

Oil has been and still is the single most important factor responsible for the dynamics of the world economy, particularly since the end of World War II. Can we be proud of its performance? Or rather ashamed from the standpoint of mankind?

Is it not natural that oil-producing countries should concert their efforts to defend their interests? The oil companies and the major consuming countries did so for many—too many—years.

I submit that the actions taken with regard to oil, as well as of other primary products and raw materials, by producer countries is more in harmony with the interests of mankind than have been the efforts of the major companies and consumer countries.

The so-called energy crisis has compelled the world to engage in an intensive and long overdue soul searching with the view of redressing the distortions and mending the damages that misuse and waste of oil have brought about, and to promoting oil as an important element for a better life everywhere.

ENERGY

Energy is the lifeblood of progress as conceived today. In fact, one can hardly think of the rapid advances made by the industrial countries during this century without the availability of ample sources of energy. Coal, the predominant source of energy until the early 1950s, has been gradually replaced by comparatively clean and cheap oil and natural gas. In 1973, the share of oil and natural gas in total energy consumption outside the socialist countries was 57 percent and 20 percent, respectively, while that of coal had been reduced to almost 20 percent. Total energy consumption in the same year was 81 million barrels per day of oil equivalent. The shift from coal to oil was accompanied by a spectacular decline in the world price of oil.

Between 1957 and 1970, the price of Venezuelan oil in constant 1957 dollars went down by some 60 percent. By contrast, the oil delivered to consumers was heavily taxed by the industrial countries. In 1967 these taxes amounted to over $5 dollars per barrel, or some 50 percent of the price component, that is, after accounting for the cost of production, refining, distribution, companies' profits, and the revenues accrued to the producing countries. The producing countries' Government-take on the other hand was only $.85. This unjust situation underlines clearly how much oil was undervalued at the source, a situation which was responsible for the profound changes and

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distortions that have taken place in the energy as well as other fields. In this sense one could state unmistakably, that the low prices of oil have contributed decisively to the sustained growth enjoyed by the industrialized countries through the appropriation of the oil "rent" by some of them. These countries took for granted this blatantly unjust situation, and with the cooperation of the oil companies did every effort to maintain it. This was intolerable. The oil-exporting countries, already conscious of the justice of their cause, asserted their sense of unity after the 1971 OPEC meeting in Teheran, when the oil price was first raised.

The so-called energy crisis, which was in the making for many years, appeared in a dramatic way during the second half of 1973. This event focused the attention of the world on the fact that oil was being used at an alarming rate, far beyond the levels that the world remaining reserves could warrant and sustain. At the prevailing rate of consumption in 1972, the OECD countries' net imports would have risen from 23 million barrels per day (b/d) to almost 50 million b/d in 1985. Had oil demand continued to increase at that pace, up to the end of the century, we would have been in need of discovering an additional 4,000 billion barrels. If one compares this figure to the 850 billion barrels discovered up to 1972 and to the maximum estimates of world ultimate reserves of 2,000 billion, one might wonder how long a situation like this could have continued. Again, it was intolerable if only because of the waste it entailed.

The energy crisis brought into relief the fact that some people were living beyond their means, making a fundamental change inevitable. The OPEC countries also became aware that their main natural and nonrenewable resource had been mainly exploited to the advantage of the consumer and was rapidly depleting. Therefore, through concerted action they were determined to increase the price of oil. That price rose too suddenly. The oil-exporting countries would have preferred—as it would have happened had it depended solely on them—to see it rise in stages rather than so quickly. But neither the companies nor the governments behind them allowed this to take place. So in a climate of acute inflation, the price of oil sprang up from the low levels at which it was kept. At any rate; had the price of oil somehow been linked to the rate of inflation since the early sixties, its level would not have been too different from what it is today.

What the producing countries have done through the higher price of oil is to obtain the legitimate benefit of the financial sources accruing from oil exports that were retained by the large consumers and used for their own interests. So these resources went back, in what could be called the Great Shift, to the legal owners of the oil.

This long overdue action has recently begun to be understood as a healthly measure. For one way to stretch the life of oil is to bring its price to an adequate level. Moreover, the prices should not only reflect the estimated life of the commodity but also the cost of alternative sources of energy which would not develop in good time if prices remained at low levels.

It is worth mentioning that the cost of alternative sources of energy, now potentially available within the next 10 or 15 years, such as shale, tar sands, coal gasification, and liquefaction, is such that a price between $16 and $20 per barrel (in constant 1974 prices) will be needed

to achieve a satisfactory return on investment. This level is substantially higher than the actual price of oil delivered to the United States, which is about $12 per barrel in current dollars.

The change in the price structure has had the effect of encouraging costly projects of secondary and teritary recovery. Secondary recovery cost 2 to 3 times as much as primary recovery, while tertiary recovery costs 10 or more times. It has been suggested that through enhanced recovery the United States can obtain an additional 1 million bbl/d in 5 years.

Likewise, the higher price has also helped to incorporate into the reserves volumes of oil known to be present in the reservoirs but previously considered uneconomic to produce. In the case of Venezuela, the higher price has brought about an increase in oil reserves of 5 billion barrels up to 18.6 billion as of December 31, 1974, and our reserve/production ratio jumped from 13 to 17 years.

A key element in oil consumption is power generation. In this area, efficiency is presently between 6 and 8 percent at the aggregate world level. By increasing efficiency (at the various levels of conversion, storage, distribution, and end use) twofold, say to 10 and 15 percent overall, we could have twice as much power available at the same energy cost. High energy-consuming countries could maintain their standard of living with half their present energy consumption. Efforts are on the way to increase the efficiency of the gasoline engine, and to improve insulation of residential and commercial buildings, thus reducing energy consumption for space heating and air-conditioning.

The price increase has made the consumer aware that much more is needed to curb the world appetite for oil in order to lengthen the time during which oil will be available to future generations. Conservation is a matter not only of looking for more oil and gas as well as controlling the use of the resources available, but also of making sure that reserves are developed with due regard to economic as well as geological considerations. In this sense, the most practical way in which oil can be conserved and developed is through adequate prices. These are the principal incentives for exploration and for increasing efficiency in its use.

STYLES OF LIFE

The pattern of oil consumption has distorted the world economy with far-reaching and damaging consequences to all people of the world, particularly the less fortunate. That pattern would have made it impossible to bridge the gap between these and the privileged. It would have perpetuated and aggravated it to the point where the privileged themselves would have been threatened by the deterioration of life everywhere. The rational use of oil can sustain and enhance sensible and just styles of life for everybody. The abuse of oil sustains irrational and unjust styles of life and, in the end, disrupts life itself.

Slowly a new pattern of oil consumption is emerging which, we believe, tends to correspond to the one we have been predicating in Venezuela, yet, admittedly, not putting it adequately in practice at home. Less fuel is expected to be used in the transportation sector as the public buys smaller, lighter, and more efficient automobiles, and increased attention is being devoted to improved mass transportation. The plastics and petrochemical industries, which at present take only a small fraction of the available oil and gas (about 5 percent in the

United States), is expected to rise to 10 percent by 1985. Even 25 percent would not appear to be an unreasonable goal. Yet, given normal developments, we may well think that 50 percent of the hydrocarbons should be set aside in due course for this type of use. Clearly, the petrochemical industry uses oil to its best end; that is, transforming oil not into a fleeting moment in which it is consumed as a fuel, but into crystallized, durable forms for an infinity of uses.

Petrochemicals represent a danger for individual life and human communities. This danger is due to the lack of foresight and vigilant attention to public interest in the development of this otherwise creative industry. Indeed, this industry has enormous potentialities for solving rationally many of the problems that confront individuals and masses of population. In a way, petrochemicals are energy turned into matter which could positively help to bring about styles of life consistent with human aspirations. One could say the same of cars as well if it were possible to stop or even to begin to diminish the automotive explosion which, although of a nature different from that of population explosion, threatens orderly and well-balanced social life just as much.

If population explosion is a phenomenon that, though based on life itself, compromises the fulfillment of the natural purposes of life, the automotive explosion is a phenomenon which, though pursuing both efficiency and pleasure at its roots, ultimately has generated inefficiency and often displeasure or social and economic unrest. So it appears that, depending on how man manages petroleum and energy in general, this could serve as a decisive element for a better life or a menace to life in all its aspects, material as well as moral and ethical.

DISTRIBUTIVE JUSTICE

We are living in a time of crisis. Today the world is facing an economic upheaval, but there is also crisis in economic cooperation which preceded it and, to a large extent, brought it about. The richer countries, which were supposed to provide 0.7 percent of their GNP to the developing countries during the Second United Nations Development Decade, have given only at an overall level of 0.25 percent. This failure is doubtlessly responsible in part for the perpetuation and aggravation of the inequities of our time, together with the disparate terms of trade that have prevailed for many decades between the primarily raw material producer and the industrialized States. The countries that form OPEC have shown more willingness to help their fellow developing nations of the third world in overcoming their present difficulties. In proportion to their GNP, OPEC countries are contributing some 10 to 15 times more than the industrial countries. But we cannot and are not going to fill the vacuum left by those countries. It is their international obligation not only to fulfill their commitments but to participate in meeting the financial problems faced by developing countries, most of them created by the longstanding economic relationship with the industrial nations. We intend to continue cooperating with the third world; we expect and hope that the traditional donor countries will contribute in accordance with their possibilities. Some have made a gallant and enlightened effort to approach this goal.

Developing and developed countries alike are now convinced that they are all members of an interdependent world. But interdependence is not something new brought into being by the energy situation; it has been in the making for decades in the economic and social fields. Interdependence cannot lead to a perpetuation of a form of relationship whereby certain countries are called upon to supply raw materials and a few semiprocessed goods to world centers and, in turn, import technology and manufactured goods from those centers. In its full sense, interdependence has given greater reality to the independence of the countries of the third world which do not want to gravitate around one nation or a cluster of powerful nations. Thus conceived, interdependence lends support to the economic independence of the weaker nations and complements the efforts that these countries are making for insuring self-reliance, including collective self-reliance among developing countries.

The oil-exporting countries intend to use oil as leverage for introducing the changes that the world economy requires without delay for the common interest. They wish to avoid confrontations. To the extent that it depends on them, they are prepared to enter a dialog among producers, processors, and consumers of energy and raw materials; in fact, a dialog between developed and developing countries. The problems are so interrelated that one would be ill advised to single out one of them, such as energy, for separate consideration, however important it may be for a number of countries or even for mankind as a whole.

Except for energy, the purchasing power of raw materials has still to be insured; in every case, it still needs to be protected. It is through this means that the developing exporting countries will be assured of the foreign earnings to purchase the equipment and other goods they require for their development and welfare. Regarding oil, OPEC countries will make certain that the demand by consumers for this essential commodity is adequately met. They undertook to do so in the Declaration of Sovereigns and Heads of State adopted in the Conference at Algiers in March 1975. But security of supply cannot be granted in an unlimited way, regardless of price and other conditions. In this respect, we are prepared to talk seriously and without inhibition.

We have before us the prospect of creating a new international economic order. The cooperation of all countries is required to bring it into progressive being. All people of the world stand to benefit from it, for an equitable distribution of wealth is at stake. Only thus can we assure stability and prosperity for the years to come.

In Venezuela, we have recently enacted a bill nationalizing the oil industry. It is the culmination of a process which took many years, more than three decades, and which will go into effect at the end of 1975 when concessions will come to an end. The possibility of a mutually beneficial cooperation between our nationalized industrial enterprise Petroven and the former concession holders is contemplated in the bill. The nationalization will result in benefits not for a few but for all—for Venezuela as a whole. We believe we have exercised a sovereign right to control our oil in a serious and responsible way without damaging legitimate rights of others. We also do not intend to disregard the country's moral obligation to those who traditionally

have depended on our oil, as the United States. Our dependence on oil is such that we cannot afford to make a mistake once the industry is under our control. Last year we nationalized our iron ore mines, but we did so in constructive communication with the companies. We arrived at positions concurred in by the companies because both Government and industry did not wish to lose contact with each other, albeit on new terms. In the oil nationalization bill, the door is left open for entering into contracts of association with private or state enterprises when they clearly promote the country's interests. Nonetheless, the state should at all times have guaranteed control over such activities. These contracts would be concluded for a specified period of time and require prior approval by our Congress.

In this coming year the United States will be celebrating the 200th anniversary of its independence. This event has special significance for many of us in the Western hemisphere. When we look back to the deeds of the founding fathers of the United States, we realize how inspiring they were for other independence movements; Venezuela achieved its political independence some 50 years later. During the Bicentennial it is appropriate to recall the foundation of the U.S. democracy: freedom, equality and friendship with all other peoples of the world. Yet 200 years after that momentous event, two-thirds of mankind is still striving to achieve a minimum standard of living and international cooperation frequently has been at a low ebb. We believe that freedom without some degree of economic well-being is freedom in name only. "All men are born equal" are words without meaning for many children born in the Third World and the pursuit of happiness another tenet with little chance of fulfillment. In the world today we ought to seek to create conditions whereby each country would attempt to meet its people's needs in material and nonmaterial requirements through its own national effort and international human solidarity. There should be no "losers." The winner would be, of course, the poorer nations of the world, but they would win at the expense of no one. In this increasingly interdependent world, prosperity that is not shared cannot be lasting. The voice of the Third World is now heard everywhere; that in itself is a positive development. And the voice should be a positive element, not arising from vindictiveness or doctrinaire motives. We Venezuelans are prepared to face our responsibility in helping to shape a more enduring and sound world order, a world closer to the human dimension nd aspirations.

Whether we shall be satisfied or dissatisfied by oil developments throughout this century will depend, in the final analysis, on how we manage such precious fuel and raw material during the next decades. Thanks to the so-called energy crisis, there is now sufficient awareness that we have to manage this natural resource with a selective and conservationist approach, a mental constraint which was practically absent heretofore in our consumer society. Will we succeed? It is a major test to man's rationality. The well-being of mankind is at stake.

B. U.S. POLICY AND POLICY OPTIONS

[COMMITTEE PRINT]

OIL IMPORTS AND ENERGY SECURITY: AN ANALYSIS OF THE CURRENT SITUATION AND FUTURE PROSPECTS

REPORT

OF THE

AD HOC COMMITTEE ON THE DOMESTIC AND INTERNATIONAL MONETARY EFFECT OF ENERGY AND OTHER NATURAL RESOURCE PRICING

OF THE

COMMITTEE ON BANKING AND CURRENCY
HOUSE OF REPRESENTATIVES

93d Congress, 2d Session

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LETTERS OF TRANSMITTAL

To all Members of the Committee on Banking and Currency:

I hereby transmit for the use of the Committee on Banking and Currency this Committee Print containing a study on "Oil Imports and Energy Security: An Analysis of the Current Situation and Future Prospects." This is the first of several reports to be submitted by the Ad Hoc Committee on the Domestic and International Monetary Effect of Energy and Other Natural Resource Pricing, which was established to undertake a survey of the economic and monetary problems we face in the wake of recent increases in energy prices. The views and conclusions of this report do not necessarily represent those of the Committee on Banking and Currency, or of any individual members.

Sincerely,

WRIGHT PATMAN, *Chairman.*

Hon. WRIGHT PATMAN,
Chairman, Committee on Banking and Currency, U.S. House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: Enclosed for your consideration is a study entitled "Oil Imports and Energy Security: An Analysis of the Current Situation and Future Prospects." This is the first of several reports to be prepared by the Ad Hoc Committee on the Domestic and International Monetary Effect of Energy and Other Natural Resource Pricing.

This Ad Hoc Committee was formed to assess the economic impact of the drastic increase in energy prices, and to survey the problems we might face with similar price increases in other natural resources. Part I of this study presents essential background material for our subsequent work, particularly our studies, now in progress, on the effects of energy prices on the international monetary system, and on the financial problems of many developing countries. Part II analyzes the options for energy policy in the United States, and reaches conclusions of particular relevance to attaining the goal of Project Independence, energy self-sufficiency.

The subsequent reports of this Ad Hoc Committee, to be prepared by its staff, will analyze current balance of payments problems, the capacity of the private international capital market to serve as financial intermediary between oil producing and oil consuming countries, the role of governments and international organizations in facilitating the flow of funds from lenders to borrowers, the estimated needs of developing countries for increased capital inflows, and the various proposals for relieving their acute balance-of-payments

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difficulties. The impact of the "energy crisis" on reform of the international monetary system will be analyzed. Finally, the Ad Hoc Committee will examine proposals for protecting the American economy from the adverse effects of attempts by other raw materials producers to impose on consumers exploitative price increases, or to deny them access to strategic commodities. This examination will place particular emphasis on U.S. policy toward stockpiling raw materials.

The Ad Hoc Committee will complete its review of these issues and submit its final recommendations by the end of 1974.

The enclosed study was completed for the Ad Hoc Committee by Douglas R. Bohi, Milton Russell, and Nancy McCarthy Snyder, economists at Southern Illinois University. It does not necessarily represent the views or conclusions of the Ad Hoc Committee, or of any of its individual members.

Sincerely yours,

THOMAS M. REES,

Chairman, Ad Hoc Committee on the Domestic and International Monetary Effect of Energy and Other Natural Resource Pricing.

SUMMARY AND RECOMMENDATIONS

SUMMARY—PART I: AN ANALYSIS OF THE CURRENT SITUATION

Chapter I: The Energy Crisis as a Problem in Economic Adjustment

The study begins by putting the energy shortage in proper economic perspective. The problem is essentially one of adjusting to higher energy prices on short term notice. The problem is not the exhaustion of the world's resource base, but rather of adjusting to the increasing cost of extracting and using energy resources, particularly oil and oil substitutes and to the substantially higher payments organized producers of world oil have been exacting over the past few years but especially since the October war of 1973. Chapter I includes a review of trends in sources and uses of U.S. energy.

The rapidity of the changes in the U.S. energy position is a most perplexing issue to American consumers. Subsequent chapters in Part I attempt to explain how we arrived at this situation and why a more timely warning was not forthcoming. Part II provides estimates of the future U.S. energy supply-demand balance, discusses the risks implied, and analyzes various policy options designed to reduce the security risk of dependence on foreign energy.

Chapter II: The International Petroleum Market—1950–74

The international petroleum market changed from a cartel of international oil companies in 1950 to a cartel of the oil exporting countries in 1974. This change had important effects on the security of supplies of U.S. consumers because of the potentially different motivations of oil companies and exporting governments. Oil exporting countries share the oil companies' desire to improve their revenue position, but may also act from geopolitical motives and interrupt supplies.

The position of the seven major international oil companies was weakened after 1950 by the inability to prevent the entry of new firms into the rich Middle Eastern oil provinces. Along with the big seven companies (by their present names: British Petroleum, Royal Dutch/Shell, Mobil, Exxon, Socal, Texaco and Gulf), there were 12 other firms with miniscule production in 1950, making 19 in total. That number had grown to 26 by 1955, 49 by 1965, and almost 100 by 1974. Entry of new firms was facilitated by the growing U.S. import market and by the disintegration of oil company and colonial control over Middle Eastern governments.

Demand growth did not keep pace wtih the rapid increases in production that accompanied the decline in power of the international oil companies. As a consequence, world oil prices fell during the decade of the '50s. In an attempt to maintain traditional margins the oil companies unilaterally reduced payments to host countries. These reductions prompted the exporting countries to form the Organization of Oil Exporting Countries (OPEC) in 1960 for the purpose of maintaining oil revenues. Prices were stabilized, but the terms of trade of

the oil exporters deteriorated because of the rising prices of their imports.

There was a gradual increase in relative strength of OPEC but that increase was not fully evident until 1970 when tightness developed in world oil markets. Choosing their targets carefully, exporting countries selected vulnerable companies (those without alternative supplies) and improved transfer prices in one area after another. The resulting Teheran-Tripoli joint agreements of 1971 not only raised the price of oil but also created uncertainty about future prices and signaled a fundamental shift in the bargaining strengths of the two parties.

A series of concessions by oil companies followed. In January 1972, the companies accepted the Geneva Agreements whereby the price of oil was increased to match the decline in the purchasing power of the dollar. In 1973, indexing of the oil price to the value of the dollar in terms of other major currencies became a reality. In late 1972, Middle Eastern producers negotiated agreements giving them partial ownership of oil facilities and the oil produced in their countries. Further participation pacts and export country control followed. The final stage in OPEC company relations came with the October War. The exporting countries took virtual control of all oil operations and now set price and production policies. By the end of 1973 the oil exporting countries were making all fundamental decisions about oil operations, including decisions about where that oil could be sold.

The change in control of the oil industry not only changed the distribution of income between oil producers and consumers but it also altered perceptions of the future course of the industry. The uncertainties of investment in OPEC countries, along with country decisions themselves, hindered the increase in production that might have prevented the energy crunch of 1973–1974. The imponderables surrounding the use of OPEC countries' control over future export capacity explains the uncertainty facing U.S. energy policy today.

Chapter III: The Domestic Oil Industry, Government Controls, and the Oil Shortage

Past government interference in the oil market contributed to the oil shortage of 1973–74, but changes in the competitive structure of the industry are a greater potential problem for the future. The bulk of economic activity in the U.S. petroleum industry has been controlled by a relatively small number of firms. Moreover, activity is becoming increasingly concentrated over time. By 1972, the top twenty firms controlled 75 percent of the U.S. crude oil production, over 83 percent of refining throughput, and about 75 percent of gasoline sales. The largest crude oil producing firms are also the largest refiners and gasoline marketers. Yet, no single firm dominates in any stage of the industry. The industry giant Exxon, controls less than 11 percent of crude production, about 9 percent of refining, and about 7 percent of gasoline sales.

Nevertheless, the independent operators in each stage of the industry are not faring well in competition with the major integrated firms. As the majors have become increasingly self-sufficient in crude supplies, the independent producers, independent refiners and independent distributors have become increasingly dependent on each other to service their needs and insert an element of competition in the indus-

try. The number of independent operators in each stage has steadily decreased.

The competitive behavior of the industry is determined in part by the extent of competition between petroleum products and other energy substitutes. The range of substitutability is limited by the nature of petroleum uses. There is relatively little substitutability with oil in the bulk of its uses. Electric generation offers the greatest range of product competition, but only ten percent of oil is consumed in this sector. The greatest potential for competition exists in the future with prospective changes in transportation modes, synthetic production from coal and oil shale, and breakthroughs in nuclear technology. The diversification of petroleum firms into other energy sources will limit that competition.

Competition is determined also in part by the ease with which new firms may enter the industry. Capital requirements form a barrier to simultaneous entry into all stages of the industry, and thus limit competition with the integrated firms on the same footing. Capital requirements and high risk also discourage newcomers in refining, transportation, and marketing. Crude oil production, on the other hand, has been freely open to competition from newcomers, at least in the past. Entry will be limited in the future by the greater capital requirements, greater technical problems, and higher risks of developing offshore and Arctic prospects. Thus, while crude oil production has been basically competitive in the past, it may become less so in the future.

In spite of the potential for competition in crude oil production in the past, oil prices and output have been determined by state prorationing controls and Federal oil import quotas rather than the market. The prorationing controls limited domestic output to expected demand at a given price. The price was maintained above the world price by limiting imports with the quota. Excess capacity was encouraged by the higher price, but the prorationing controls warped incentives in favor of development drilling on known prospects rather than exploration for new reserves. Consequently, when demand expanded over time, increased output could not be sustained. Known reserves were simply used up more quickly, new discoveries were not available for replacement, so output peaked after 1970 and began to fall off.

Production controls and the import quota also prevented the market from reflecting the changes in supply and demand conditions and warning of the impending shortages. Prices remained fixed. Consequently, buyers and sellers were not alerted to the changes in demand and supply conditions and thus not induced to react in timely and orderly ways. The necessary resurgence in exploration activity was delayed until after the shortages developed. Demand turned to imports, but domestic refineries could not handle the influx of sour foreign crudes. Refineries were not built ahead of time to handle imports because import controls had made foreign feedstocks inaccessible or uncertain. Foreign refineries had not been built for the U.S. market because product imports were limited too.

Additional inflexibilities added to the shortage. The long period of decline in domestic exploration and drilling left the industry poorly prepared to meet the resurgence in demand. A tubular goods shortage developed with the surge in drilling activity, but price controls limited

the incentives of the steel industry to meet the demand. Tanker capacity could not adjust to the sudden increase in U.S. import demand, so tanker rates have increased along with oil prices. In short, various interferences with the market mechanism have produced many unforeseen but mostly deleterious results.

Chapter IV: An Anatomy of the Shortage—1973–74

Numerous factors contributed simultaneously to the energy shortage of 1973–1974. No single factor was important enough by itself to explain the problem. Certainly, the Arab oil embargo was not the primary cause. Imports were higher through most of the embargo period than they were during the previous year. The shortfall in domestic crude output and refining capacity would have led to a shortage even without the embargo.

Problems in the international energy market were, of course, significant. Uncertainty with changing export country policy prevented the build-up of sufficient production and processing capacity to meet the needs of a simultaneous boom among all industrialized nations. The decline in output from some of the countries with low sulfur oil was particularly harmful to the U.S. position because domestic refineries were designed to handle the sweet crudes those countries produced.

The U.S. domestic petroleum industry could not increase output in response to the growth in demand because of institutional constraints.

The regulation of the field price of natural gas reduced incentives for discovery, increased consumption, and distorted allocation among alternative markets. The effects of price regulation were relatively small and hidden before the late 1960's. Then, however, the growing demand for gas forced prices sharply higher in non-regulated intrastate markets, absorbing all available gas. Potential consumers in the interstate market were forced to switch to the only other environmentally acceptable fuel available—petroleum. Natural gas regulation, then, increased energy consumption, reduced energy supply, and because of the faulty market signals generated, placed a sudden and unanticipated pressure on petroleum products.

The coal industry was in poor condition to meet new energy demands during the early 1970's. A long period of secular decline left the coal industry with reduced production capacity. Environmental controls restricted the use of some techniques and environmental uncertainty hindered opening new installations. Health and safety regulations have reduced labor productivity. Transport systems were inadequate. Shortages of essential materials existed because of the rapid build-up in production and because of rigidities created by price controls and general economic uncertainty. As a result, coal production was scarcely able to meet traditional markets; it could not replace petroleum and natural gas.

One of the reasons for the poor state of the coal industry was faulty expectations regarding the role of nuclear power. Nuclear power had been expected to take on a large part of the electric generation load, and consequently little research was done on methods to improve coal use and production. The failure of nuclear power to develop as anticipated not only left the country without a nuclear capability, but without alternative fuel capability either.

In general, the energy shortages can be laid to an unexpectedly high growth in demand and to failures of both foreign and domestic supply to respond to changing conditions. The unanticipated demand growth was partly due to environmental constraints and partly to the economic boom. Environmental and safety controls also hindered swift increases in energy supply. The energy crunch resulted from a series of policies that prevented the smooth operation of market forces in stimulating domestic output and restricting domestic demand in an orderly way.

Chapter V: Costs and Prices—1971–74

The delivered price of a barrel of crude oil is the sum of production costs, royalties, taxes, company margins, transport costs and import duties. A representative price is difficult to calculate because of the vast array of oil prices and the small proportion of crude oil traded in the open market. Our conclusions are reached with full recognition of these problems.

In analyzing industry price behavior the price paid for marginal oil is the only one relevant. It determines decisions to produce or import more or less. On this ground the relevant price for analysis is the delivered price of a barrel of Persian Gulf crude oil. It increased from less than $3/bbl in early 1971 to more than $12/bbl in January 1974.

Transport costs per barrel of Persian Gulf crude oil were approximately $1.40 in January 1971. Three years later they were about $1.88/bbl. The tanker industry is highly competitive so this increase reflects demand conditions.

Production costs have not increased in the Middle East during the past three years. In 1971 production costs in Iran and Saudi Arabia were $.12/bbl. In 1974 these costs were $.12/bbl in Iran and $.10/bbl in Saudi Arabia.

Payments to host countries consisted of a royalty (12.5 percent of the posted price) and a 55 percent tax in 1971; the sum of these elements was $.97/bbl in the Persian Gulf. Due to increases in the posted price of crude oil (from $1.80/bbl to $11.65/bbl) the per barrel payment to the host country increased to approximately $7.00/bbl for the company's share of output. In 1974, however, the oil companies no longer "owned" all the oil. Instead, Saudi Arabia, Kuwait and some other Middle Eastern producing countries had negotiated agreements with the companies gaining 25 percent ownership. Some of the oil owned by the countries was resold to the oil companies ("buy-back" crude) at prices above tax-paid cost. The remainder was sold in the open market by state-owned companies. Thus, the countries received an average per barrel payment of slightly more than $7.00 in January 1974, and will earn still more under agreements for higher levels of crude ownership negotiated this spring.

The market price of Persian Gulf oil in January 1971 was $1.44, f.o.b. Kharg Island. With a tax-paid cost of $1.103, the company margin was approximately $.337/bbl. In January 1974, the f.o.b. price was $10.83. A tax-paid cost of $7.108 implies a company margin of $3.722 on each barrel of equity crude (i.e., crude owned by the oil companies). Even if a weighted average is taken of all Saudi Arabian equity crude and buy-back crude, margins remained well above $3.00

in January 1974. The situation that prevailed in January is no longer relevent. Under the 60–40 participation agreement negotiated between the oil companies and the Arab producers, the average cost of equity and buy-back crude is $9.34/bbl. At a market price of $10.83, company margins are in the neighborhood of $1.50/bbl. By the end of 1974 Saudi Arabia is expected to have 100 percent participation.

The price of domestic crude oil began to rise in early 1973 after remaining relatively constant at approximately $3.41/bbl for many years.

Phase IV guidelines established a two-tier pricing system in August 1973. For every barrel of "new" crude oil (output beyond the 1972 level from any given property) freed from price controls an additional barrel was also "released" from price controls. Later, oil from stripper wells was also exempted from price controls. By January 1974 approximately 25 percent of U.S. production was selling at a market determined price of approximately $10.00/bbl. The remainder was sold at the controlled price of $5.25/bbl. The weighted average price for domestic crude was approximately $6.44 in January 1974.

Refined petroleum product prices increased appreciably. In January 1971 the average retail price of a gallon of major brand regular gasoline was 35.56¢. In January 1974, the average price was 45.28¢/gallon. Simple statistical methods show that refinery margins have not increased substantially.

The price of petroleum and its products has risen substantially since 1971. The disposition of these price increases is interesting. Resource costs did not change significantly in the Middle East, but did increase in the U.S. The small increases in resource costs that have taken place do not explain the very large price increases that have been witnessed. The windfall gains to oil companies resulting from the shifts in energy supply and demand in the past three years have been very large. Already, however, company margins are being reduced by increased costs for foreign oil and by eroding prices. The remainder of the price change has gone to the OPEC producers. Their quasi-monopoly profits can only be maintaianed if OPEC restricts output.

SUMMARY—PART II: FUTURE PROSPECTS

Chapter VI: Petroleum Security—The Problem and the Issues

The purpose of Part II is to discuss the problems and issues involved in achieving and maintaining secure energy supplies in the future. The crux of the issue is to reduce the uncertainty of price and supply arising from a growing dependence on energy imports. As energy demand grows, the share of imports in total consumption increases, leaving us more vulnerable to sudden supply disruption. The reimposition of an oil embargo against the U.S. would require large supply and demand adjustments. Chapter VI focuses on these adjustments.

In the short run existing fuel inventories could be drawndown, some wells could be operated beyond their maximum efficient rates of production, and Naval Petroleum Reserve 1 (Elk Hills) could be brought into production. Oil could be conserved by switching some electric utilities to coal. In general, however, any major short run adjustments will come from demand reduction. Mandatory and voluntary

conservation measuress can curtail demand approximately 3 MM b/d without imposing substantial hardship. In the longer run, price increases resulting from shortages will further reduce energy demand. Estimates of short run price elasticity range from −.2 to −.4 while long run elasticity is between −.4 and −.7. Also, there are specific measures that could be implemented to reduce energy consumption.

The United States possesses enormous energy resources that have not been developed. In the event of a prolonged embargo, development of new sources of energy and expanded use of conventional sources will result from price increases. Government cooperation could speed this process but shortages of drilling rigs, steel pipe and trained manpower would arise. Large scale production of synthetic fuels could not be expected for at least two years after an embargo even in the most favorable of circumstances.

Even if crude oil production were stepped up, bottlenecks in processing capacity would limit energy output. Those bottlenecks are being reduced. Prevailing high prices have already increased refinery capacity. Projected expansion indicates that sufficient refinery capacity will be available in a few years to handle prospective emergency domestic production in the event of an embargo.

Demand for coal would increase markedly in an emergency for use in electric generation. In order to increase coal production quickly, government leasing of Western coal lands and relaxation of environmental constraints would be necessary. Nevertheless, shortages of mining equipment and trained personnel will handicap any effort to expand output.

Currently operating nuclear electric generating plants could be brought up to capacity if environmental safeguards were assured. It is unlikely that any of the other exotic forms of energy—breeder reactor, solar, geothermal—will contribute significantly to our energy supply before the end of this century. They would certainly be irrelevant in a supply emergency.

The conclusion of this analysis is that the adjustment to an import interruption would be long and painful. It would take at least two years, in the most favorable of circumstances, for domestic supply to respond sufficiently to ease a serious shortage. The mobilization of resources to meet the pressures placed on the domestic energy industry would be very difficult to accomplish. We must therefore provide protection against the uncertainties of energy supply and price that confront us. In responding to the dangers there are several issues that must be weighed: What are the dangers that must be protected against? What is the appropriate level of protection? What policy options are available? Which policies have the greater advantages and smaller disadvantages?

Chapter VII: Lower Bound Price of Imported Oil

In the event that OPEC is not successful in maintaining cartel prices, it becomes important to consider the lower bound price of oil imported into the U.S. The lower bound price is important for policy decisions regarding energy security because, unless the domestic market is isolated, domestic industry faces considerable risk in implementing investment required to increase domestic output. The price need not actually fall to the lower bound; merely the prospect of its doing so is sufficient to discourage capital investment.

The Persian Gulf is taken as the price-determining source of future world oil supplies. The minimum landed price is estimated at $3/bbl. The cost of producing and delivering a barrel of Persian Gulf oil to the U.S. is fairly well-defined; it is expected to be around $2/bbl for prospective production volumes. The most uncertain element of the price is the royalty return to the oil exporting country.

Owners will be motivated to sell their resources whenever the expected return in the future, discounted to the present, is less than the current royalty. If royalties are expected to increase in the future, resource owners will demand higher royalties today or else slow extraction; lower expected returns in the future will induce them to speed extraction today. The royalty will normally increase with time as the resource becomes exhausted. Eventually a price will be reached where alternative energy sources become economically feasible and substitution for oil begins. The more rapid the technological progress toward substitutes, the earlier in the life cycle of the resources this process begins. After substitution begins, owners of oil resources can no longer hold the same expectations as before. They will accept lower royalty rates and increase the rate of extraction in order to convert their oil assets into another form with a more lucrative future. This process is the market's way of conserving a scarce resource until an alternative becomes available, and then disposing of the remaining reserves quickly as their use-value falls to zero.

In order to estimate future royalties, we need to know what the oil exporting countries expect to happen to prices in the long run. These expectations are a priori indeterminent so we ask what is the minimum return the oil producers may be willing to accept in the event that the OPEC cartel collapses completely and irreversibly. There is perhaps no better answer than the royalty that existed before the OPEC cartel began to flex its muscle; about $1 per barrel.

Chapter VIII: Future Oil Import Requirements

It is estimated that the U.S. will require oil imports of about 7.6 MM b/d in 1985. Under optimistic assumptions, import requirements may fall to less than 1 MM b/d; while under pessimistic conditions imports of 14.8 MM b/d may be required. Taking the approach that energy policy must be geared toward the risks of the pessimistic outcome, subsequent discussion of policy alternatives concentrates on the midpoint estimate of 7.6 MM b/d and the upper import estimate of 14.8 MM b/d. As a percent of projected domestic consumption, these estimates come to about 35 percent and 55 percent, respectively. This forecast is based on the work already published by the National Petroleum Council, modified by recent developments and different assumptions. In essence, the forecast is a projection of supply and demand assuming that the current crude oil price of near $8/bbl persists indefinitely in the future. The gap between domestic supply and demand at the assumed price implies either imports or the necessity to raise the price to stimulate output and discourage consumption until the market clears. A range of possible outcomes is developed by combining a high and low rate of demand growth with a high and low rate of domestic supply availability.

In balancing projected demand with projected supply it is assumed that all potential energy supplies but coal and nuclear power will be utilized. More coal and nuclear power may be available for electric

generation than can be absorbed. The gap between domestic supply and demand for energy translates into import demand for oil and natural gas. We assume, however, that the price of naturel gas will be deregulated and that imports are consequently limited to pipeline imports from Canada (and possibly Mexico). Gas imports are converted into oil equivalents and added to total oil import requirements.

The import estimates are broken down by projected source. The midpoint estimate closely resembles the actual 1973 volume, so the breakdown is expected to be about the same. Some increases in imports from Iran and Nigeria are expected more on the basis of favorable trading relationships with these countries than on the basis of expanded output capacities. The increase in imports implied by the upper estimate must come from Arab sources, mainly Saudi Arabia. Arab imports in the midpoint case are estimated at 1.8 MMb/d and in the upper case at 7.9 MMb/d. These volumes represent 8.1 percent and 29.1 percent, respectively, of total domestic oil consumption.

Chapter IX: Energy Security Goals and Policy Options

The security risk associated with energy imports is the economic disruption that results from uncertain quantity and prices. The balance of payments burden is minimized because the U.S. is likely to be a net recipient of recycled "petro-dollars." Nevertheless, a major goal of U.S. policy must be to provide sufficient investment opportunities for the oil exporting countries and to facilitate the recycling of international capital flows. The risk of supply interruption can be met through increased storage and shut-in capacity, not necessarily by eliminating imports. This option is discussed in Chapter X. Price uncertainty can be minimized through import controls, subsidies, or taxes. These policies operate through the relationship between the domestic price and domestic output, consumption and imports.

Starting with the import projections in Chapter VIII and assuming that the price elasticity of supply is 1.0 and the price elasticity of demand is −0.5 (i.e., a 1.0 percent change in price causes a 1.0 percent change in output and a −0.5 percent change in consumption) a relationship between price and imports is estimated. Complete self-sufficiency may be achieved in the long run at a domestic price between $10/bbl and $13/bbl, using the midpoint and upper import estimates, respectively. Lesser degrees of self-sufficiency can be achieved at correspondingly lower prices.

The estimates imply that domestic self-sufficiency can be achieved if the domestic price is allowed to rise to the current world level, and if producers and consumers expect it to remain there indefinitely. Some caution is required in interpreting these estimates, as noted in the text.

The estimated price-import outcomes could be achieved with the use of import controls. The tariff would raise the domestic price until the quantity of imports is reduced as desired. Alternatively, the quantity of imports may be limited by a quota, forcing the domestic price to rise until the market is cleared. In principle, the results would be the same with either a tariff or a quota. There are, however, important economic differences between the two policies, as discussed in Chapter XII.

Import controls raise the price to domestic producers in the same way as does a subsidy and to domestic consumers in the same way as does a consumption tax. The subsidy may be used to stimulate additional output without affecting consumption patterns, while the consumption tax may be used to reduce consumption without altering production incentives. If consumption is to remain unaffected, complete self-sufficiency requires a subsidized price to producers between $12/bbl and $18/bbl, using the midpoint and upper estimates respectively. The implied subsidy (on top of the $8/bbl assumed price) ranges from $4/bbl to $10/bbl. If the price to producers remains unchanged, complete self-sufficiency requires a consumption tax-plus-price of between $13/bbl and $17/bbl in order to depress consumption to available domestic supplies.

Chapter X: The Risk of Supply Disruption

An embargo is an economic weapon used for political purposes. The many cultural, political, religious and social differences that exist among the OPEC members make it highly unlikely that the organization as a whole could find a common cause or target for a politically oriented embargo. The costs of an embargo, moreover, would be borne unequally among the member states, reducing further the probability of an OPEC embargo. The possibility that a subgroup of OPEC would be willing to disrupt supplies to the U.S. is very real.

The only subgroup of OPEC capable of such action is the Arabs. Only the Arabs have a sufficient share of the world oil market, do not need to export to the U.S. and have the potential political incentive to initiate an effective embargo. Even though the threat is real, complete enforcement of an embargo against one or a few importers is nearly impossible. Development of excess capacity throughout the world and commercial maintenance of increased inventories will reduce the impact of future embargoes. On the other hand, the growing dependence of the U.S. on Arab imports and the expanding role of Arab producers in shipping and refining operations increase the risks of supply interruption.

Given the major adjustments that would be required in the event of a future supply interruption (as explained in Chapter VI) we conclude that there is justification for maintaining some stand-by petroleum reserves. One way to maintain these stand-by reserves would be by means of storage. The cost of storing a barrel of oil in an above ground steel tank is estimated to be between $2.04 and $2.29 per year. A program of storage would have to protect against interruption in insecure supplies for a period of 180 days. With Arab imports expected to range between 1.8 MM b/d and 7.9 MM b/d in 1985, annual storage costs would be between $661 million and $3.76 billion.

An alternative means of maintaining emergency oil supplies would be shut-in productive capacity. In order to reduce the security risk of imports, such capacity would have to be in amounts beyond that maintained for domestic production. This policy is practical considering our estimates of the long run price elasticity of supply. The cost of maintaining excess capacity is the amount required to induce the producer to hold his oil in the ground, i.e., the interest earned on the value of the oil that could have been produced. Annual costs of shutting-in 1.8 MM b/d capacity at $10/bbl and 10 percent interest would be $3.0 billion. A policy of protection by means of stand-by capacity

has the advantage of not being restricted to a particular time period.

Even if a given amount of shut-in capacity is maintained for emergencies it will take a certain amount of lead time to bring the facilities up to active production. An optimal policy of protection against a short run supply disruption would be some combination of storage and shut-in capacity. A combination policy to provide essentially the same protection would be cheaper than either the storage or shut-in options alone. Under present circumstances, shut-in capacity of 1.5 MM b/d and 90 day's storage for insecure oil would be called for.

The main advantage of a policy to deal specifically with emergencies, rather than to seek continuous self-sufficiency, is that it allows us to take advantage of imports from insecure sources as well as to conserve the domestic resource base. The disadvantage of a policy designed for emergency use only is that it provides little protection against violent price fluctuations and the uncertainties associated with them.

Chapter XI: The Role of OPEC in World Petroleum Supply

The oil exporting nations now control the world oil market. The important matter for importing countries is how this newly won power will be used. Political and historical factors play a great role in oil exporting country decisions, but the outside constraints on those decisions are created by economic forces.

OPEC has signaled its intent to operate as a cartel to increase revenues. Essential to this goal is the ability to restrain output in order to maintain price. The efficient means of operating a cartel are not available to an organization made up of sovereign nations because high cost operations can not be shut down and production controls can not be enforced. The cartel can establish a target price and allocate production quotas to make all producers better off than they would be under competitive market conditions. Adjustments from those quotas then can be negotiated within the organization.

The price that the OPEC cartel will choose must be associated with some external referent. For reasons developed in the text, it is our view that OPEC will choose $10/bbl, a level approximately equal to the energy self-sufficiency price in the U.S. The f.o.b. price on this basis ranges from a high of $10.28 in Algeria to a low of $7.01 in Kuwait. These are the prices we predict these countries will receive *if* the cartel holds in the long run. It is notable but not surprising that the long run cartel price is lower than the prices which have resulted from the recent disequilibrium in world petroleum markets. World oil prices should trend downward in the intermediate term.

The long run cartel price can only be maintained if each country is satisfied with its share of total sales. Inevitably, however, some will not be—they will wish higher sales to take advantage of a cartel price far above their current costs. As individual countries place more oil on the market the cartel price will soften. It is our thesis that short run price declines *will* occur, but will be constrained by a lower bound cartel price. This lower bound exists because countries believe that the price of oil will return to $10 after the cartel reasserts its influence. Consequently, rather than sell their oil at the lower price, they would prefer to leave it in the ground.

The lower bound cartel price is the present value of the future revenue that could be received from a barrel of oil if it were produced later

rather than immediately. This value will differ by country depending on the discount rate and its f.o.b. price. According to the calculations in the body of the study the reservation prices (c.i.f. the U.S.) for oil from different OPEC countries range from $7.88 for Qatar to $2.29 for Indonesia. We conclude that intra-cartel jockeying for greater sales will not drive the price below about $7.50 so long as its members expect the cartel to continue to exist in the long run. On the basis of our analysis several countries appear to have internal goals consistent with efforts to increase output, even though increases mean lower prices. Potential price-cutters include Indonesia, Iran and Nigeria. Several counrties, especially the producers on the Arabian Peninsula, will resist increases in output and choose to maintain high prices.

In the face of these conflicting pressures, the issue becomes one of whether the cartel can actually survive. We conclude that the cartel would likely remain secure if the only threat comes from economic factors. Mistakes can always occur, of course, and misconceptions about country resolve and bargaining strength can lead nations into dangerous errors that would destroy the cartel. The OPEC cartel can also fall because of internal conflicts or because of massive shifts in world supply or demand conditions. These latter two classes of disruptions are not predictable: Should the cartel fail for any of these reasons, the result would be the competitive price.

Chapter XII: Tariffs, Quotas, and Self-Sufficiency

The estimates in Chapter IX imply that domestic self-sufficiency could be achieved without import controls if the world price remains above $10/bbl, and the domestic price is permitted to rise to that level. Suppose, however, that the world price falls. Chapter VII concludes that it could fall to as low as $3/bbl (c.i.f. the U.S. East Coast) if the OPEC cartel dissolves and competitive conditions prevail in the world oil market. Chapter XI concludes, on the other hand, that the cartel is not likely to collapse in the foreseeable future and that the landed price of U.S. imports will likely remain about $7.50/bbl. The $3/bbl and $7.50/bbl landed prices provide the maximum differences with the domestic price under two extreme world market conditions: competition and monopoly.

The difference between the domestic price and the world price maintained by import controls provides the basis of the protective effect to domestic industry, but also the opportunity cost of import controls to domestic consumers. If the import price were $7.50/bbl, it is estimated that U.S. consumers will pay about $34 billion more for petroleum products than necessary if all imports are eliminated. If the import price were $3/bbl, U.S. consumers may pay up to $66 billion more than necessary if imports are eliminated. These figures suggest a heavy burden associated with self-sufficiency.

These costs apply whether tariffs or quotas are used. However, tariffs and quotas differ with respect to uncertainty about quantity and prices, discriminatory properties, administrative flexibility, and the scarcity value of imports. Quotas maintain absolute certainty about the quantity of imports, but uncertainty about the price necessary to clear the domestic market. Tariffs, on the other hand, establish the domestic price with relative certainty, but the resulting quantity of imports is uncertain. Quotas, moreover, tend to insulate the domestic

market from changes in demand and supply conditions, while tariffs tend to transmit the effects through prices.

Quotas are inherently discriminatory (unless auctioned) with the licenses issued by subjective criteria. Tariffs, in contrast, operate through the market system so that anyone wanting to import, from any source, may do so. Both controls may be designed to discriminate according to country of origin, but this effort may not be very successful. Quotas are more flexible to administer because they normally do not require legislative approval, while tariffs do. Greater flexibility is advantageous if changes in market conditions warrant changes in import restrictions. However, there is much to be said for maintaining public debate even at the expense of flexibility. The difference between the price of imports and the domestic price represents a scarcity value of imports that accrues to the government if tariffs are used, but to either importers or exporters if a quota is used. If the OPEC cartel persists, the scarcity value of imports likely will go to the oil exporting countries if a quota is used.

The inflexibilities imposed on the market by the quota system provides a compelling reason to prefer a tariff if imports are to be controlled at all. A tariff is not recommended except perhaps on a standby basis to limit the risk to domestic industry of a decline on the price of imports below, say, $7/bbl.

Chapter XIII: Direct Policies to Enhance Energy Security

Direct policies can be used to reduce U.S. dependence on foreign oil sources and thus to reduce energy insecurity. These policies subsidize domestic energy production, foster other changes in energy consumption and production and reduce energy demand.

Subsidies are in general against the public interest because they distort the decisions made by producers and consumers and lead to inefficiencies in the allocation of resources. They can be justified only if they increase efficiency or bring about a desired change in the distribution of income in an efficient manner. While subsidies in general are not recommended, if a subsidy is to be granted, it should be based on capacity, not output. Government risk-absorption is a special form of subsidy. Two types of risk can be distinguished: market risk resulting from the uncertain price with which U.S. producers must compete; and technological risk resulting from the uncertain costs of new initiatives in energy supply. Market risk can be reduced by government production of energy to its own account and by a government-guaranteed price for private production. Sound arguments against each of these alternatives exist, on grounds that the second order effects are distinctly negative.

Government absorption of some of the technological risk associated with increasing energy supply is desirable on many grounds. Government subsidies for research and development, with proper guarantees to assure free and easy access to information by all parties, can reduce the total resource cost of new energy supplies. Additionally, such government support would tend to promote competition by lowering entry barriers and increasing the number of participants in energy production.

A switch in the use of research and development funds as well as an increase in their quantity is called for. More funds should go to intermediate term projects and government support should be continued

through the prototype stages of projects so that a full range of possibilities may be explored. Too often the high-risk—high payout options have been allowed to wither because private firms could not afford the risk involved in pursuing them. Expanded government activity in developing data underlying potential petroleum exploration decisions and in developing coal and shale conversion technologies are recommended uses of additional funds.

Several ancillary policies could be adopted to improve energy security. Among these are alterations in the way public lands are opened for exploitation, deregulation of the natural gas industry and a change in focus of environmental goals. With reference to federal land leasing, diverse methods of bidding, especially through the use of varying royalty shares, should replace sole reliance on bonus bidding. Competition would be enhanced and capacity would be increased through such a change. The deregulation of the field price of natural gas would increase the supply of both gas and oil and restrict gas consumption in inferior uses.

Environmental *goals* need not be violated to obtain greater energy security, but delays in achieving those goals would reduce their long run energy cost. A shift in the focus of environmental regulations away from fuels and toward emissions and their effect on ambient air and water quality would lead to more efficient results. Policies which improved the functioning of international markets and which facilitate foreign investment in U.S. equities would be especially helpful in inducing oil exporters to continue to supply the U.S. market without interruption. Finally, investment in U.S. energy supply can be made relatively more attractive by eliminating subsidies to export of energy equipment and by abolishing tax incentives to foreign energy production.

Policies that restrict energy demand can contribute to energy security. Such policies include improving consumer information regarding the relative efficiencies of different pieces of equipment. Research can wisely be advanced on more efficient energy consumption devices and use patterns. Beyond these techniques, about which few would disagree, are instruments to reduce particular types of energy consumption and to reduce energy consumption in general. Selective restriction on energy use involves the substitution of governmental edict for private decision-making. A general tax on petroleum, on the other hand, would be consistent with the general welfare so long as the revenues cover no more than the real cost of energy consumption, including the cost of increasing security and the cost of compensated environmental damage.

RECOMMENDATIONS

The U.S. should embark on a new course in developing and using energy resources in order to limit the vulnerability which arises from dependence upon foreign energy supplies. This conclusion flows from the study presented below. The study also points up, however, the basic strength of the U.S. energy industry and the relative security of the U.S. position. Consequently, the evidence does not warrant crash programs to alter dramatically the institutional arrangements under which energy is produced and consumed. Massive public expenditure programs to enhance energy supply are not required. More specifically, energy self-sufficiency is not an obviously worthy goal; direct limita-

tion of energy imports, except in extraordinary circumstances, is not desirable. A number of major changes in federal energy policy are required, however, if the U.S. energy economy is to remain both strong and secure.

The broad conclusions enunciated above, and the specific recommendations offered below, follow from a set of value judgments shared by the authors. A different set of value judgments applied to the same analysis might yield different policy conclusions. The primary test to which the recommendations below were subjected is whether they would improve the ability of the people of the U.S., as a whole, to satisfy their wants in the present and in the future. That ability is enhanced when our scarce resources are allocated more efficiently in both production and consumption. Two constraints are to be implied as lying within this goal of enlarging the want satisfying power of the ecenomy. First, the possibility of irreversible deterioration of the quality of life must be minimized. Consequently, a minimum level of energy self-sufficiency must be maintained to prevent the sacrifice of political freedom to a foreign power which holds our energy supply in hostage; irreversible environmental degradation must be avoided; forces should not be set in motion that would lead to the early exhaustion of the resource base. Second, the costs of enhanced energy security should not threaten the level of living of the poorest of our citizens.

Based on the analysis of this study, and the values outlined above, we make the recommendations below. Note, however, that these recommendations are made as a package. To adopt some without the others may create more problems for the energy economy than would adoption of none. The problems of energy insecurity have largely been created by ad hoc, piece-meal responses to what appeared at the time to be particular needs. To continue to approach energy policy in the same fashion may create even more critical problems in the future.

There are five major goals of the recommendations below. These are to increase the competitive posture of the domestic energy industry, to reduce our reliance on foreign energy sources by increasing domestic energy production and reducing domestic energy demand, to protect the nation against short term supply interruptions, to improve the climate for international trade and investment and, finally, to protect the poorest of our citizens from such harmful effects as these policies visit upon them. Some of the specific recommendations below have implications for more than one of these general goals.

Goal 1: To improve the competitiveness and the efficiency of the U.S. energy market.—An efficient and competitive energy industry is needed to take advantage of the opportunities that lie ahead. Basic reform of the industry is required so that producer and consumer planning can take place within a framework of price signals that truly reflect market forces. Specific recommendation to fulfill this goal include:

(1) Limit the extent of vertical integration of petroleum firms. Move toward eliminating participation in more than one major segment of the industry.

(2) Limit horizontal integration of energy firms to one major energy source.

(3) Alter Federal leasing policy by limiting the number of joint ventures by the largest crude oil producing firms; encouraging joint ventures by smaller firms; and eliminating sole reliance on the lease bonus approach to bidding in favor of diverse criteria—including bidding by royalty shares. All three of these recommendations are designed to reduce the barriers to entry of newcomers by reducing initial capital requirements, delaying capital expenditures and reducing risks.

(4) Eliminate crude oil price controls. The present two-tiered price system creates inefficiencies in both production and consumption and establishes discriminatory treatment of geographic regions, refiners, and marketers.

(5) Deregulate natural gas prices. The present price control program reduces gas production below the amount warranted by the value of natural gas and encourages its inefficient use.

(6) Repeal the Connolly Hot Oil Act that gives Federal sanction to state market demand prorationing statutes.

(7) Eliminate the preferences to U.S. shipping in the haulage of petroleum from Alaska and in carrying imported oil.

Goal 2: To reduce reliance on foreign energy sources.—The goal of narrowing the import gap should be undertaken only by means that would enhance the ability of the U.S. to meet other needs as well. A policy of self-sufficiency is not recommended. A number of policies would narrow the import gap without significantly reducing the efficiency with which our economy's resources are allocated. Specific recommendations include:

(8) Provide extensive geological data on all Federal lands (and private lands where practical) to potential energy producers. This policy would also lower barriers to entry in the petroleum industry and assist in achievement of Goal 1 above. Use oil consumption tax revenues to finance this program.

(9) Broaden and deepen government support of research and development in energy technology. Reallocate an expanded effort to develop new energy sources away from nuclear energy. Seek to develop new technology for finding and producing conventional energy sources (e.g., support research in oil finding techniques and in new methods of increasing recovery from known reservoirs). Increase the emphasis on research for improving efficiency in energy use. Provide federal financing of capital requirements for promising pilot projects implementing new energy technology. Use oil consumption tax revenues to finance this program.

(10) Encourage the use of coal for electric generation. Improve the Clean Air Act to permit the use of high-sulfur coal where emissions can be controlled and air quality standards permit. Support research for clean use of coal and its environmentally safe production. In general, eliminate the environmental uncertainties surrounding the production and consumption of energy.

(11) Protect domestic energy producers from some of the risk of foreign oil price fluctuations by establishing a stand-by tariff to maintain the import price at a minimum of $7.00/bbl.

(12) Eliminate tax provisions that encourage the exploration and development of foreign energy sources. Eliminate other in-

centives to foreign energy development such as export bonuses and subsidized credit for energy investment abroad.

(13) Eliminate discriminatory tax provisions favoring income received from the production of energy. Energy prices should reflect the full cost required for its production.

(14) Establish minimum standards for thermal efficiency in new buildings as a prerequisite for approval for federal lending programs or mortgage insurance programs. Establish energy consumption disclosure on other capital assets where lifetime energy consumption has a marked effect on the total cost of owning the asset.

(15) Impose a tax on the consumption of oil, natural gas, and their products to pay the costs of government programs to increase energy security. Combine these tax revenues with the highway trust fund and eliminate the spending requirement on highways. (Payments to government from the use of the public domain, i.e., least bonuses and royalties, should go into the general fund and *not* be earmarked for energy security purposes. These payments represent part of the real costs of energy and should not be used to reduce the energy tax assessment.)

Goal 3: To protect the nation against short-term supply interruptions.—Protection against short term supply interruptions is required if we are to free our policy from inappropriate foreign influence. Energy security can be achieved without the cost of adopting a policy of self-sufficiency through shut-in capacity and reserves beyond those needed for commercial purposes. In pursuit of energy security the government should:

(16) Mandate an increase in storage capacity of crude oil beyond commercial needs by enough to cover sixty days of supply of imports from whatever source might be considered unstable or insecure. The storage should be arranged and paid for by the importer and passed along to consumers through higher prices. Storage must be in excess of commercial needs and not drawn upon except under authority granted after supply interruption.

(17) Establish as soon as practicable shut-in petroleum producing capacity (along with all the necessary transportation and processing equipment) of .5 MM b/d. The level of imports from insecure sources should be monitored and shut-in capacity increased commensurately with any increases therein. Such capacity can be created most easily on public lands, but it should be located so that it can readily and efficiently replace foreign oil. OCS placement, with tanker loading facilities in place, would be appropriate for this purpose. Use can be made of special leasing provisions for the public lands and of the Naval Petroleum Reserves. Care should be taken, however, that the full cost of the shut-in capacity is borne by consumers of petroleum through the petroleum consumption tax and not covered by a transfer from the public domain.

Goal 4: To improve the climate for international trade and investment.—Energy security can be obtained most readily in an interdependent world economy where oil exporting countries find it in their interest to develop their production and recycle their earnings in the form of investment in and purchases from oil importing countries. Consequently, in pursuit of this goal the U.S. should:

(18) Facilitate the productive investment of surplus oil revenues in the U.S. Oil exporting country investment in oil refining and marketing facilities in the U.S. should be encouraged in particular.

(19) Develop international monetary facilities to provide an incentive to oil producers to recycle oil revenues to less developed countries. A guarantee program or other cooperative venture among oil consuming nations may be required to facilitate this last aim.

Goal 5: To protect the poorest of our citizens from having their absolute standard of living reduced by the above measures.—Inevitably the above measures will increase the relative and absolute levels of energy costs. Those costs should be borne by energy consumers in general, but the income (not energy consumption) of the poorest of our citizens should be protected. Consequently, adoption of a program for energy security also implies that we should:

(20) Revise the tax and transfer payments schedules to reduce the burden of higher energy costs on the very poorest of our citizens. That burden should be placed on petroleum consumption.

UNITED STATES GENERAL ACCOUNTING OFFICE

REPORT TO THE CONGRESS

CONGRESSIONAL RESEARCH SERVICE
JAN 29 1974

Issues Related To Foreign Sources Of Oil For The United States

B-179411

Department of State

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-179411

To the President of the Senate and the
Speaker of the House of Representatives

This is our report concerning issues related to foreign sources of oil for the United States. It deals with the Department of State's involvement in the international petroleum situation.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Copies of this report are being sent to the Secretaries of State, the Treasury, the Interior, Commerce, Transportation, and Defense; the Chairman of the Oil Policy Committee; the Administrator, Federal Energy Office; the Administrator, Environmental Protection Agency; and the Director, Office of Management and Budget.

Elmer B. Staats

Comptroller General
of the United States

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ABBREVIATIONS

GAO	General Accounting Office
OECD	Organization for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
NATO	North Atlantic Treaty Organization

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

ISSUES RELATED TO FOREIGN SOURCES OF OIL FOR THE UNITED STATES
Department of State
B-179411

DIGEST

WHY THE REVIEW WAS MADE

This report discusses (1) the State Department's role before eruption of hostilities in the Middle East in October and Arab curtailment of petroleum exports and (2) the critical problems facing the Department in resolving the issues connected with the current and future availability of this vital raw material from sources outside the United States.

The fundamental issues involved in the international petroleum scenario, although altered somewhat by recent events, remain essentially unchanged. They include

--the future availability of petroleum imports,

--agreements with oil-exporting countries,

--agreements with oil-consuming countries,

--outlets, such as increased trade and investment opportunities, for the increasing monetary reserves of oil-exporting countries, and

--the Department's role in negotiations between oil companies and producer countries.

Facts basic to understanding the problem

Petroleum supplies about 44 percent of U.S. energy needs. Before Middle East countries cut off oil shipments in October 1973, the United States was importing 35 percent of its total petroleum requirements at a cost of about $7 billion annually.

Prior to the President's energy message of November 7, 1973, in which he called for the United States to be self-sufficient by 1980, experts were predicting that the United States might have to import up to half its total oil requirements within the coming decade.

Imports of that magnitude would result (according to estimates) in a $35 billion annual balance-of-payments deficit for the United States.

All major free-world powers are in a petroleum deficient position.

Unless alternative sources of energy are developed quickly, Russia is the only world power that will be self-sufficient in energy resources in the coming decade.

U.S. oil companies in mid-1973 controlled, or had rights associated with, about half the world's proven oil reserves; however, other countries receive about 90 percent of the oil exports from the major exporting countries.

In mid-1973, the United States was importing about 10 percent of total requirements from the Eastern Hemisphere. Within the coming decade, projections show, the United

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States will need to secure as much as 33 percent from the Eastern Hemisphere--largely the Middle East.

GAO's review was completed before the October outbreak of hostilities in the Middle East.

FINDINGS AND CONCLUSIONS

Until alternative sources of energy are developed, the availability of foreign petroleum products to the United States will, to a great extent, govern the future of American industry, transportation, and way of life. Therefore, the national policy on energy must be fully and mutally coordinated with U.S. foreign policy.

If future U.S. oil imports are to be insured, workable solutions are needed for a variety of foreign policy issues.

The increasing demand for Middle East oil and the sharply rising prices paid to the producer countries is resulting in their accumulating billions of dollars in monetary reserves. Authorities have calculated that the Arab nations could control more than one-half of the world's monetary reserves within the coming decade.

Such reserves--if satisfactory trade and investment opportunities are not found--may be a disincentive for further expansion of production and may permit the Arab nations to use their control of petroleum for political purposes. This is of significant concern when it is considered that U.S. foreign policy is offensive to several Middle East oil-producing countries. (See pp. 23 and ch. 6.)

Already oil-producing countries are taking over greater control of their petroleum resources through participation agreements with the oil companies and nationalization of oil company assets and are leveling off production in the face of rising demand. (See pp. 18 to 20.)

The Department has unsuccessfully attempted to negotiate bilateral agreements with several Western Hemisphere countries for a continuing supply of oil.

The Department has not sought similar arrangements with Eastern Hemisphere countries, which have the major portion of the world's supply of oil, on the grounds that such agreements would create difficulties with oil-consuming allies.

A number of oil-consuming nations, including some U.S. allies, have negotiated agreements with oil-producing countries to insure their future supplies.

Department officials have exchanged information and discussed energy problems with other major oil-consuming countries. In addition, they have been trying to conclude agreements with other consuming countries to develop alternative sources of energy and multigovernment contingency plans in case of supply disruption. No agreements have yet been concluded. (See ch. 5.)

The Department keeps abreast of the oil situation consultations with both the oil companies and the producing countries and has acted as the go-between for the negotiating parties. It has not, however, participated in a substantive way in negotiations between the oil companies and the producer countries.

Although the Department does obtain a great deal of information on these matters, it has not made regular comprehensive analyses of the probable impact of impending agreements. Its role in five agreements between oil companies and producer countries is discussed on pages 28 through 42.

Traditionally the State Department has used its influence and programs to promote an environment conducive to U.S. private investment in foreign countries. Only general guidance on the methods to be followed in creating such an environment has been established, much being left to the judgment of the Ambassador and the U.S. country team.

At the same time, the Department generally has avoided direct involvement in the nature, substance, and behavior of private industry. (See pp. 25 to 28.)

The Department must play a major role in developing the national policy on energy and influencing the substance of oil negotiations. Its responsibilities in protecting the Nation's interests in the rapidly evolving world energy situation obviously are important. It should, therefore, improve its capability to deal effectively with energy related problems.

It cannot be shown with any reliability that the outcome of negotiations would have been different if the Department had had the details concerning the negotiations. At the same time, it is clear that the results of recent negotiations, coupled with U.S. policy toward Israel, has left the United States with a less secure supply of oil than was the case before the negotiations were undertaken.

RECOMMENDATIONS AND SUGGESTIONS

During its review GAO made a number of proposals for action by the State Department. These were directed toward the Department's taking a more vigorous role in developing a national policy on energy, strengthening its capability to analyze the ramifications of ongoing oil negotiations, and influencing negotiations between oil companies and oil-exporting countries when vital U.S. interests are at stake.

GAO's proposals were designed to spell out priority areas in which action should be taken by the Department to accomplish these objectives. (See p. 59.)

In view of the highly volatile situation which has emerged in the Middle East since these proposals were made, GAO is deferring specific recommendations to the Department at this time.

AGENCY ACTIONS AND UNRESOLVED ISSUES

The State Department generally agreed with the basic conclusion of this report. Both the Department and the Office of Management and Budget expressed reservations about the Department's increasing its guidance and monitoring activities in oil negotiations.

They argued also against actual participation in the negotiations because this would be inconsistent with the traditional Government-business relationships. However, the Department recognized that the changing company role and the growth of large multinational companies required a changing U.S. Government role and indicated that the problem was being explored.

GAO did not call for direct participation but rather pointed to areas where the Department could intensify its capabilities to deal with the ramifications of the international oil situation.

The Department mentioned its efforts to develop trade and investment opportunities in the oil-producing countries and indicated its intention to increase its activity in these areas.

MATTERS FOR CONSIDERATION BY THE CONGRESS

Although the handling of the issues discussed in this report will be influenced by world opinion and the overall Arab-United States-Israeli relationships, the issues, in and of themselves, ultimately must be dealt with. This report contains information on this broad subject which the Congress should find useful as it considers future energy proposals and programs.

CHAPTER 1

INTRODUCTION

Today, cities and towns in various regions of the United States are feeling the effects of some fuel shortages. Before the end of this decade, the United States along with other industrial countries could be facing an even more severe energy crisis.

Our report to the Congress, "How the Federal Government Participates in Activities Affecting the Energy Resources of the United States" (B-178205, Apr. 6, 1973), noted that, in fiscal year 1972, 23 Federal departments and independent agencies--consisting of 64 offices, bureaus, commissions, and administrations--used 44,000 man-years for energy-related programs and activities.

The President has overall responsibility for U.S. foreign policy but looks to the Department of State for primary advice in forming and executing this policy. The Department maintains an Office of Fuels and Energy, with a staff of four, to act as a focal point for international petroleum matters.

In addition to the Department, the Cabinet-level Oil Policy Committee and the new Energy Policy Office are responsible for U.S. international petroleum policies.

The Chairman of the Oil Policy Committee is responsible for providing policy direction, coordination, and surveillance of the oil import program. At the time of our review, the Committee consisted of the Deputy Secretary of the Treasury, as Chairman, and the Secretaries of State, Defense, the Interior, and Commerce; the Attorney General; and the Chairman of the Council of Economic Advisers, as members.

At the time of our review, the Departments of Defense, State, the Treasury, Commerce, and the Interior had undertaken studies, requested by the National Security Council, on energy and its commercial and foreign relations aspects. As of July 1973, the studies had not been completed and no target date had been set.

In June 1973, however, the President created a new Energy Policy Office, to be responsible for formulating and coordinating energy policies at the Presidential level. He also asked the Congress to establish a new Department of Energy and Natural Resources. The new Cabinet-level department would be responsible for the balanced use and conservation of America's energy and natural resources and would assume certain responsibilities now assigned to other Federal agencies.

Although petroleum is the largest single source of U.S. energy, domestic sources are not meeting the country's petroleum needs. Industry and Government experts predict that reliance on foreign countries for oil will increase significantly in the next decade.

SCOPE OF REVIEW

Our review was directed principally to determining whether the Department of State's practices and diplomatic efforts were adequate to insure the continued availability of sufficient foreign oil to meet the U.S. demand until alternative domestic sources of energy were developed.

We reviewed (1) Department activities concerning five oil agreements negotiated in 1971-72 between Middle East countries and U.S. oil companies, (2) the Department's role in recent intergovernmental petroleum activities concerning Venezuela, Canada, Saudi Arabia, Ecuador, and Colombia, and (3) the Department's initial efforts to coordinate a petroleum policy with other major oil-consuming countries.

We took our statistics from information provided by the oil industry in various publications, congressional hearings on energy matters, and data supplied by Government officials. The work on this review was completed before the October 1973 outbreak of hostilities in the Middle East.

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CHAPTER 2

PERSPECTIVE ON THE U.S. ENERGY CRISIS

The United States, with only 6 percent of the world's population, uses an estimated 35 percent of all the energy produced in the world. Petroleum provides about 44 percent of U.S. energy needs. (See chart on p. 8.) Although it is an essential ingredient in our economy and way of life, we have only about 7 percent of the world's known petroleum reserves.

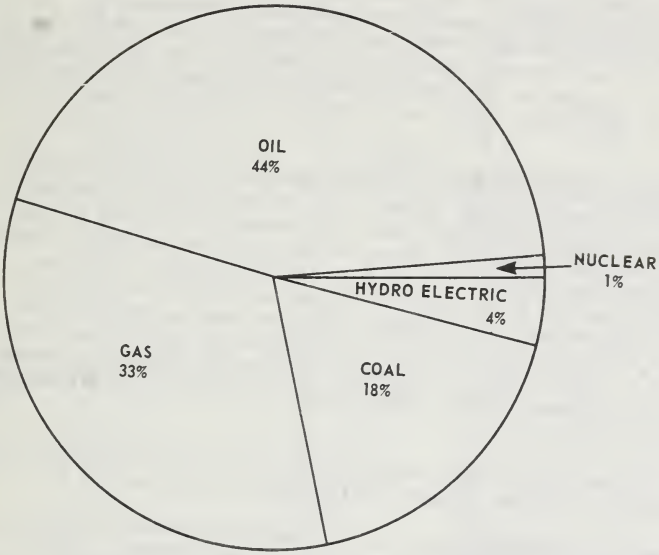
Every segment of our economy reflects this dependence on petroleum. For example, 54 percent of our petroleum requirement is used in transportation, 20 percent in industry, 14 percent in residences, 7 percent in electrical power generation, and the remaining 5 percent in commerce.

The recently discovered Alaskan North Slope oilfield, which is almost inaccessible now because of transportation problems, contains one-fourth of the known U.S. reserves. Even with these reserves, the United States had only an estimated 6.1 years' supply of oil in 1972, based on present demand. According to both Government and oil industry experts, future production in Alaska, estimated at 2 million barrels a day, will merely offset declining production elsewhere in the United States.

Although we have imported petroleum for at least 50 years, only in the last decade has our expanding domestic demand outstripped our productive capacity, thus necessitating a drastic increase in imports. In mid-1973 we were importing 35 percent of our total oil consumption-10 percent from the Eastern Hemisphere. Department officials estimate the current cost of petroleum imports to be $7 billion annually.

According to Government and oil industry experts, U.S. demand for oil will double in the next decade. Thus, if U.S. production remains constant, as predicted, new demands for oil must be met by increased imports. The magnitude of the projected demand may make alternative sources of energy more economically attractive or absolutely necessary. However, their availability, according to Government experts, in the short to medium term is unlikely.

SOURCES OF U.S. ENERGY



Goverment sources estimate that by 1980, unless major technological advances are made in the energy field, the United States could be importing about half (12 million barrels a day) of our predicted daily oil consumption. As much as two-thirds of these imports may have to come from sources in the Eastern Hemisphere, largely from the Middle East. U.S. imports from the Middle East today are relatively small; by 1980 they would well entail 7 million or more barrels a day.

Japan and the industrialized nations of Europe, which already use substantial quantities of oil, are also expected to significantly increase their oil use. As in the United States, oil has been the mainstay of their economies. Demand in Western Europe is projected to double from 12 million barrels a day in 1970 to 24 million barrels a day in 1980. Japan's percentage of increase will be even greater--from about 3.8 million barrels a day in 1970 to over 10 million barrels a day in 1980. However, unlike the United States, Europe and Japan already import most of their petroleum from the Middle East.

The problem is not one of quantity in the world but of availability to the United States and its allies.

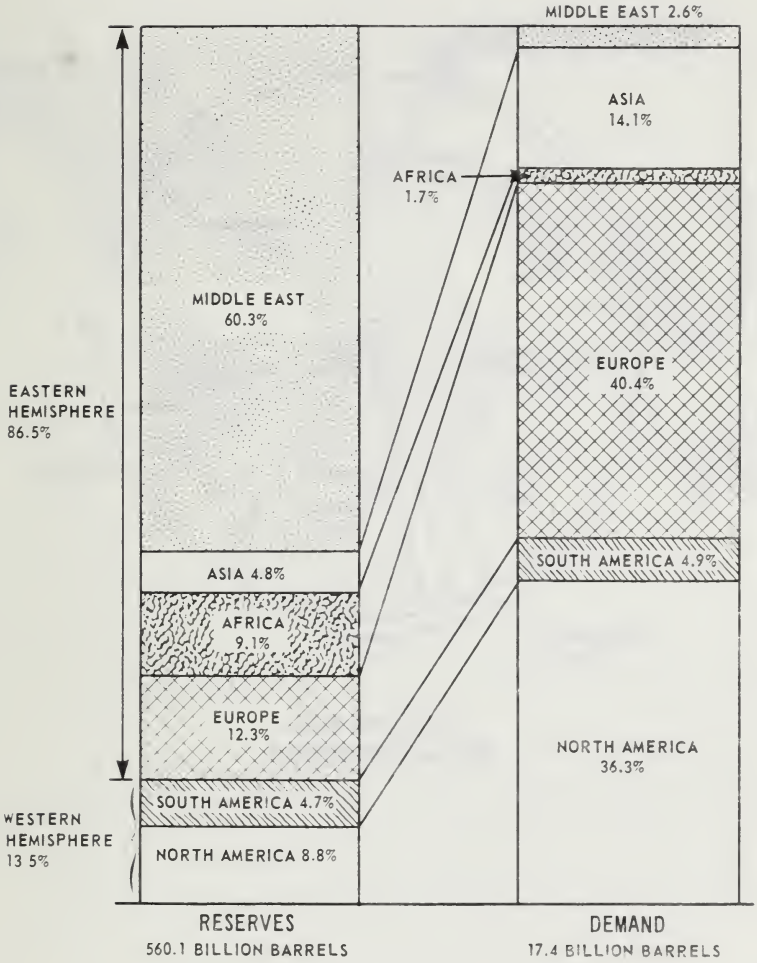
Nearly three-quarters of the world's proven reserves of petroleum are located in the Middle East. Saudi Arabia, Kuwait, and Iran have about half the world's reserves. Saudi Arabia alone has one and three-fourths times as much oil as all the Western Hemisphere countries combined. Thus, the Middle East will undoubtedly remain the main source of world petroleum in the foreseeable future.

Russia has about 10.5 percent of the world's proven oil reserves along with major gas reserves and coal deposits. Unless there are major technological advances, Russia is the only world power that will be self-sufficient in energy resources in the coming decade.

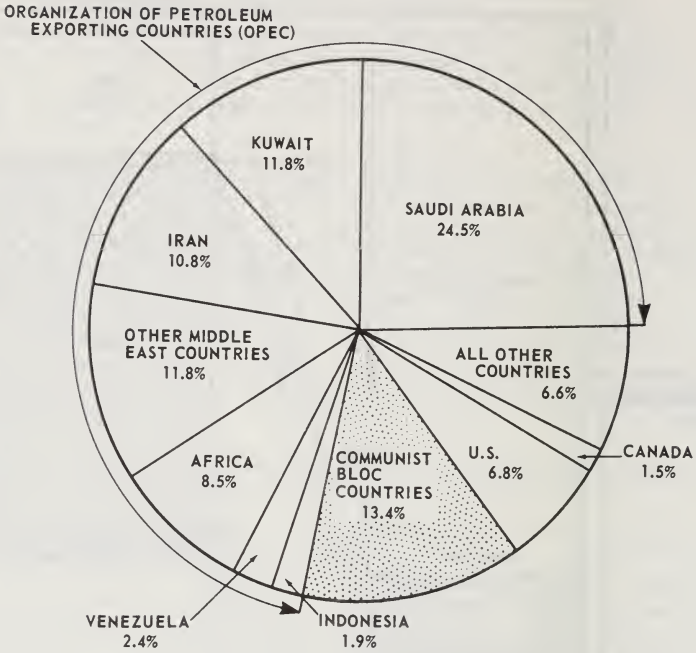
The following charts better indicate which parts of the world have the oil reserves and where oil is used.

Recent discoveries estimated at 9.6 billion barrels on the Alaskan North Slope have added significantly to known reserves but have not solved the impending energy crisis.

WORLD RESERVES AND DEMAND

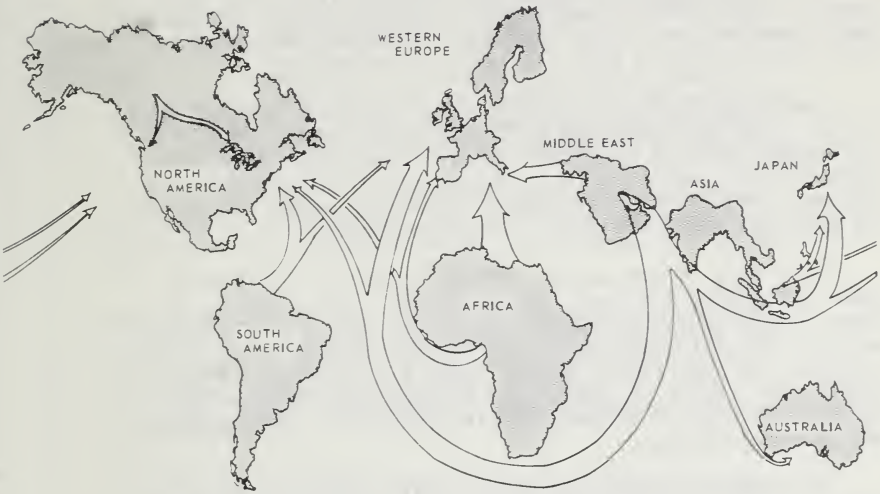


WORLD PETROLEUM RESERVES
1972



TOTAL RESERVES
560.1 BILLION BARRELS

MAJOR INTERNATIONAL OIL MOVEMENTS



Environmental problems connected with production and transportation have delayed the attempts to use this oil.

A Government official has indicated that, on the average, 7 years is required to develop an oilfield after its discovery. Thus, even if major new oil deposits were discovered, their contribution to the domestic oil supply could not be fully realized until near the end of this decade.

Geologists believe offshore areas may hold a great deal of oil. The Department of the Interior estimates that 171 billion barrels of crude oil are recoverable from offshore drilling under current technological and economic conditions, once it has been found. However, proven reserves for offshore wells are only 7.7 billion barrels.

According to geologists, domestic reserves of fossil fuels (oil, gas, and coal) and potential new resources of clean energy (nuclear, solar, and geothermal) are plentiful, but they are not being developed rapidly enough to meet increasing national requirements. None are expected to have a significant impact on short- and intermediate-term energy supplies because of economical, technological, environmental, and leadtime reasons.

Alternative sources of energy will require billions of dollars in new construction and conversion of existing facilities. For example, nuclear energy will require an estimated $190 billion investment by 1990; development costs for coal gasification could reach $20 billion in the next 10 years.

Following are the projected availabilities of some potential oil substitutes, according to Government and industry experts.

--Natural gas is in short supply and shortages are expected to increase. Domestic production is projected to decline about one-third during the next 15 years. With more imports of natural and liquified gas and synthetic gas (from naptha and coal gas), availability may stay at about its present level. This would satisfy less than half the potential gas requirements by 1985.

--Tar sands oil is not competitive today because of high costs for extraction and production and for environmental reasons. Although this oil is expected to be available by the mid-1980s, a capital investment of about $2 billion would be required to produce 1 percent of U.S. energy needs in 1985.

--Shale oil production is feasible but would require large outlays of capital. It should also be available by the mid-1980s, but a major environmental problem can be expected if strip-mining techniques are employed.

--Coal is plentiful, but strip-mining and deep-mining problems must be solved. Better sulfur emission controls and an economical method for converting coal to gas still need to be developed.

--Numerous nuclear power generating stations have been planned or initiated; but, because leadtimes are long and because nuclear power currently can be used only for electric power production, it cannot be considered a real substitute for most petroleum uses in the next decade.

--Geothermal technology must be further developed and environmental problems must be solved before it can be used on a national scale. By 1985 it might provide 1 percent of U.S. needs.

--Other energy sources, such as thermonuclear fusion, solar energy, tidal energy, and fuel cells, are unlikely to provide a meaningful energy contribution in the near future.

In June 1973 the President asked the Congress to create an independent Energy Research and Development Administration and proposed that a $10 billion program be initiated in fiscal year 1975. To give impetus to the plan, a $215 million program has now been proposed for fiscal year 1974.

On November 7, 1973, following the cutoff of Arab oil to the United States, the President proposed, as a national goal, that by 1980 the United States develop the potential to meet its own energy needs from its own resources.

CHAPTER 3

PROBLEMS RELATING TO FOREIGN SOURCES

Petroleum is vital to our national security and economic growth. Because our need for oil imports is increasing, foreign policy considerations are becoming more complex.

From 1959 until April 1973, the United States limited the amount of its oil imports primarily for national security reasons; that is, to prevent undue reliance on insecure foreign sources of petroleum. However, as our dependence on foreign oil increases, the need to develop an adequate foreign policy to protect our continued supply of oil becomes apparent.

The Armed Forces use only about 6 percent of the total U.S. consumption today, while in World War II they used almost 20 percent. The per capita consumption of the Armed Forces today, however, is about four times higher than in World War II. It is clear that petroleum is vital to military security. Not only would the Armed Forces be immobilized without it, but the production, use, and maintenance of almost all military equipment would be affected. The broader economic concern is the security of supplies for immediate requirements of the economy and for sustained future economic growth.

The freedom to conduct U.S. foreign policies and carry out international responsibilities can be adversely affected by the dependence on excessive amounts of foreign oil. The importation of oil is one of the most sensitive areas in which a nation is subject to pressures from outside sources. Oil-exporting countries are showing an increasing tendency to use energy resources to influence the foreign policies of importing countries. Government officials recognize that our diplomatic endeavors must take into account coercive outside influences arising from dependence on oil imports.

In December 1972 the Director of the Office of Emergency Preparedness stated that whoever controls Middle East oil in 1980 can have major leverage on the energy and foreign policies of any oil-deficient country, such as the United States.

Our preeminent world position depends largely on the uninterrupted flow of oil and its products to the Armed Forces and to the civilian economy. No practical substitutes currently exist for oil, and normal petroleum consumption cannot be reduced in significant quantities without seriously impairing production, transportation, heating, and military capabilities. The alternatives, such as stockpiling massive reserves to meet U.S. requirements for long periods, are not economically realistic. For example, a train loaded with oil, stretching from Washington, D.C., to Cincinnati, Ohio, represents only a 1-day supply for the United States.

Security requires that we consider the potential effect on our allies of significant increases in U.S. oil imports from sources now providing Europe with 85 percent of its oil requirements.

Although we imported 35 percent of our petroleum in mid-1973, numerous Government studies have concluded that reliance on insecure foreign sources for more than 10 percent of our oil endangers national security. A major study was prepared in 1970 by a Cabinet-level Task Force on Oil Import Control chaired by the present Secretary of the Treasury and adviser to the President on economic activities. It stated that national security would not be impaired until oil imports from the Eastern Hemisphere--identified as the least secure supply source--exceeded 10 percent of U.S. demand. The task force did not explain its reasoning in stating that this ratio would be safe in future years when all Western Hemisphere reserves had greatly diminished.

Political disruption of transport routes, production restrictions, and other noneconomic factors reduce the security of supply. Such interruptions have occurred at intervals in the Middle East since 1948 when Iraq closed a major pipeline. Starting in 1951 the Iranian oil industry was shut down for nearly 3 years, and virtually all exports were halted following the nationalization of the Anglo-Iranian Oil Company. In the 1956 Arab-Israeli War, the Suez Canal was closed and major pipeline pumping stations were destroyed. The Suez Canal was closed again and production was temporarily suspended in all major Arab oil-producing countries immediately after the start of the 1967 war. Subsequently, exports to the United States, Britain, and West Germany were briefly embargoed. The Trans-Arabian Pipeline, with a capacity of 175 million barrels a year, was sabotaged in 1969 and remained

closed for about 8 months. It has been sabotaged a number of times since. In 1971, British Petroleum's assets in Libya were nationalized and production from its fields was halted as retaliation against the British Government.

Most crude oil and petroleum products coming into this country by sea (including those from the Virgin Islands) are being carried by foreign-flag vessels. Thus, we are becoming increasingly dependent not only on foreign sources of oil but on foreign transportation. About 23 percent of the world tankship fleet is controlled by U.S. companies but sails under foreign flags for convenience and economy.

To date, the United States has been able to obtain most of its petroleum imports from Western Hemisphere sources because imports have not exceeded the supply available from Canada and Latin America (considered secure sources). Preferences given these Western Hemisphere sources, in the form of special allocations under the oil import quota system (before April 1973) and reduced tariffs and cheaper transportation costs, allowed them to compete favorably with the less secure sources of the Middle East. In 1972 the United States was receiving its oil from the following sources.

Origin of Oil Consumed in the United States by Percentage

	1960	1970	1971	1972 (note a)
Western Hemisphere:				
Domestic	81	77	75	71
Canada	1	5	5	7
Venezuela	12	11	10	10
Other Western Hemisphere (note b)	1	3	4	5
Eastern Hemisphere:				
Middle East	4	1	3	4
Africa	(c)	1	1	1
Indonesia	1	1	1	1
Other Eastern Hemisphere	(c)	1	1	1
Total	100	100	100	100

[a]Estimated.

[b]This data essentially represents refined products shipped from Caribbean refineries. Eastern Hemisphere sources provide over 80 percent of the input to these refineries.

[c]Negligible.

OIL-PRODUCING COUNTRIES UNITING AND TAKING CONTROL

A number of the world's major oil-producing countries have pooled their power in a group called the Organization of Petroleum Exporting Countries (OPEC). These countries which control 85 percent of the oil available for export to the free world are: Abu Dhabi, Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, and Venezuela. OPEC's primary accomplishments have been to deter price competition among themselves, increase profits, conserve oil reserves for future production, and gain participation arrangements with the oil companies. Their united efforts have not only substantially raised the price of oil but also lessened oil companies' control in OPEC countries.

An agreement concluded in December 1972 between several Arabian Peninsula OPEC countries and the oil companies has introduced a new principle into oil concession negotiations --gradually increasing host government control in oil operations. These governments become part owners of companies holding oil-producing concessions and are entitled to a share of the output proportionate to their share of ownership. This is in addition to taxes imposed by the exporting countries, which now amount to a minimum of 55 percent of the companies' net profits derived from each OPEC country.

The agreement provided for an immediate 25-percent interest increasing in steps until 1983, when the host countries will have attained a 51-percent controlling interest.

Libya, not a party to the Participation Agreement, has been taking control of its oil resources in the following ways.

--Expropriated British Petroleum Company holdings in late 1971.

--Fully nationalized one U.S. company in early 1973.

--Concluded agreement in mid-1973 with two major U.S. companies to acquire 51 percent of their holdings immediately.

--In September 1973, announced the takeover of 51 percent of the in-country holdings of five other companies.

As the oil producing countries' equity in oil increases, the American companies' control over oil production and distribution decreases.

OIL PRODUCTION LEVELING OFF

Some of the major oil-producing countries, including Libya, Kuwait, and Venezuela, have begun leveling off their oil production.

Despite having the second largest volume of proven oil reserves in the world, Kuwait imposed production controls in 1972 on the Kuwait Oil Company (its major oil company, owned by Gulf Oil and British Petroleum). In 1971 crude oil production averaged 3.2 million barrels a day, of which the Kuwait Oil Company produced 2.9 million barrels. In 1972 total production was 3.4 million barrels a day and Kuwait Oil Company's output was restricted to 3 million barrels. Kuwait officials have indicated that in 1973 production will increase 1 percent at most, exclusive of a small added output from the Neutral Zone.

Kuwait and Libya slowed production, at least in part, on the grounds that they did not need and would not use their present oil revenues. Saudi Arabia has indicated that it may not increase production to the extent that the world will require if it cannot invest the resulting income profitably. Venezuela, with dwindling reserves, has apparently "peaked out" on production of oil from conventional sources.

PROTECTION OF U.S. INVESTMENT ABROAD AND FOREIGN AID

The U.S. Government is generally committed to the protection of U.S. citizens, their rights, and their property abroad. In the case of the petroleum industry, their overseas investments total about $24 billion. Recent nationalization and participation efforts by OPEC countries have tended to increase the risk factor for this huge capital outlay.

In the past few years, there have been at least 15 situations involving nationalization, expropriation, or negotiated sale of petroleum assets. The significance of these and similar situations in other industries motivated the United States in 1971 to prohibit all assistance to any country which expropriates U.S. holdings without compensation. The President clarified this position in February 1972 by stating that:

> "Henceforth should an American firm be expropriated without reasonable steps to provide prompt, adequate and effective compensation, there is a presumption that the expropriating country would receive no new bilateral economic benefits until such steps have been taken, unless major factors affecting our interests require us to do otherwise."

This, however, is not a strong deterrent to most major oil-exporting countries because they receive little or no U.S. foreign aid.

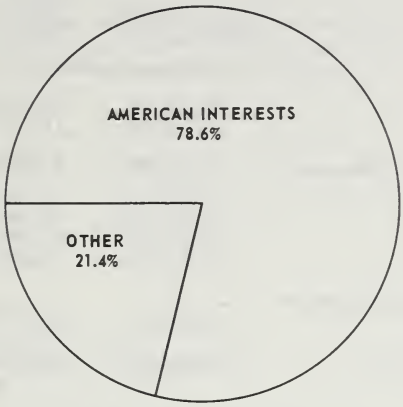
Since World War II, U.S. oil companies have progressed rapidly to a dominant position in the international oil industry. However, foreign markets, such as Europe and Japan, receive about 90 percent of the oil from the oil-exporting countries. The following chart and schedule (see pp. 22 and 23) show that U.S. oil companies controlled or had rights associated with more than half of the world's proven oil reserves in 1971. We have been informed that, although these figures have not been updated, in mid-1973 U.S. oil companies' interest in the world's oil reserves was still about 50 percent.

RESPONSIBILITIES OF U.S. OIL COMPANIES

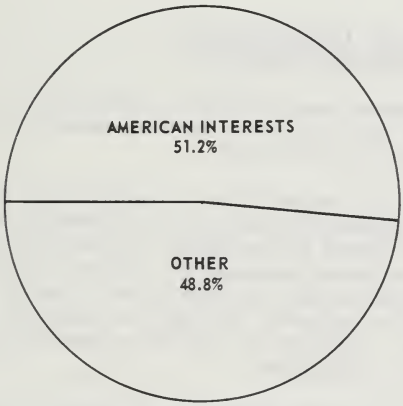
Although the U.S. Government is responsible for protecting American oil companies' rights and properties overseas, these companies are free to trade in any world market. The U.S. Government does not have any formal commitment from these companies to ship oil to the United States, even in emergencies.

Department of State officials indicated that U.S. firms are obligated to honor existing supply contracts with foreign purchasers and stated that, if the U.S. Government ever overrode the companies' contractual obligations, it should be prepared to see refinery and other facilities abroad adversely affected and U.S. relations with its allies seriously jeopardized.

AMERICAN INTERESTS IN WORLD RESERVES



WESTERN HEMISPHERE



EASTERN HEMISPHERE

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Crude Petroleum Estimated Proven Reserves for World and Percent of U.S. Interests

Region	Total reserves Jan. 1, 1971	American interests (note a)	Percent
	(Thousands of barrels)		
North America	53,138,315	43,900,000	82.6
South America	25,576,068	18,000,000	70.4
Total Western Hemisphere	78,714,383	61,900,000	78.6
Europe (note b)	66,369,200	2,000,000	3.0
Africa	46,317,400	26,700,000	57.6
Middle East	342,133,500	210,400,000	61.5
Far East and Oceania	18,928,671	3,500,000	18.5
Total Eastern Hemisphere (note b)	473,748,771	242,600,000	51.2
World total	552,463,154	304,500,000	55.1

[a]Estimated.

[b]Including U.S.S.R. and Communist-controlled countries.

OFFENSIVENESS OF U.S. FOREIGN POLICY TO SEVERAL OIL-PPODUCING COUNTRIES

Several oil-producing countries, especially in the Middle East, have foreign policies that in some measure directly oppose those of the United States.

In 1972 Arabs in responsible or influential positions made 15 different threats to use oil as a weapon against their "enemies." Almost all of them singled out the United States as the prime enemy because of its pro-Israeli policies. For example, a punitive tax on foreign oil companies was formally proposed in November 1972 at the opening of the Arab Boycott Conference. Officials said the proposal was specifically aimed at U.S. companies.

The tax was to be proportionate to the military and economic aid provided to Israel by the oil companies' home countries. Proceeds from the tax would be paid into a special fund which would finance Arab armament factories and other

heavy industry needed in modern war. To date, however, the Arab oil-exporting countries have not acted on this proposal.

In October 1973 most of the OPEC countries in the Near East publicly announced a policy of cutting off oil to the United States in retaliation for the open U.S. support of Israel in the present Arab-Israeli hostilities.

CHAPTER 4

LIMITED DEPARTMENT OF STATE ROLE IN INTERNATIONAL PETROLEUM NEGOTIATIONS

The Department of State has traditionally used its influence and programs to promote an environment conducive to U.S. private investment in foreign countries. Only general guidance on the methods to be followed in creating such an environment has been established; much has been left to the judgment of the Ambassador and the U.S. country team. The Department has also generally avoided direct involvement in the nature, substance, and behavior of private industry. Department officials state that they get involved only in flagrant cases of bad corporate conduct.

The Department does keep abreast of the oil situation and holds meetings with oil company representatives and government officials from exporting countries. However, an official in the Office of Fuels and Energy did advise us that his office does not have enough employees to make detailed studies on energy matters. It does review reports and obtain information from field personnel in the Embassies and other agencies operating overseas.

We were also told that the Department did not participate in the negotiation meetings and that information on the progress of actual negotiations was passed on to them by the interested parties.

GENERAL POLICIES

The State Department's role in international petroleum matters is guided by several basic foreign policies, including

--maintaining friendly diplomatic relations with both oil-exporting and oil-consuming nations,

--allowing free enterprise to determine the terms of oil contracts,

--protecting and promoting U.S. investment, and

--helping to maintain national security by diversifying the sources of oil imports.

Although formal statements of U.S. policy and interests in the various oil-producing countries are generally broad in scope and are different for each country, the primary U.S. interest in most of these countries can be characterized in terms of oil. Its continued availability has been of vital importance to the economies of our North Atlantic Treaty Organization (NATO) allies and friends, and assured sources of petroleum to our own energy-hungry economy are rapidly increasing in importance. U.S. companies have invested heavily in developing oil resources abroad, and the returns on these investments have contributed substantially to our international balance of payments.

The Assistant Secretary of State for Near Eastern and South Asian Affairs, noting the U.S. strategic and commercial importance of oil in the Middle East region, recently stated that maintaining friendly relations with the governments of the area was important to insure an environment in which economic cooperation in petroleum and other activities can flourish.

Historically, the Department has seldom intervened directly in international petroleum agreements; negotiations have been left largely to the private sector. According to a policy background paper prepared in 1973 by the Senate Committee on Interior and Insular Affairs, the U.S. international oil policy has historically tended to mirror the oil industry's general interests and perceptions.

For national security reasons, the United States has attempted to obtain most of its petroleum imports from the Western Hemisphere. However, diversity of import sources also is considered a good way to minimize the effect of a major supply interruption from a single source.

BRIEF SUMMARY OF PAST DEPARTMENT INVOLVEMENT

After World War I the U.S. Government concluded that American interests should secure possession or control of reserves in foreign lands. In the 1920s, the Department carried out a campaign, against British and Dutch opposition, to make way for American enterprise. The first major

acquisitions by U.S. companies of rights to develop oilfields in Iraq, the Netherlands East Indies, Colombia, and Venezuela date from that era.

During World War II the emphasis was again on U.S. control of foreign oil, but this time the Middle East was the center of concern. Several American companies held large oil concessions in the Middle East. Company officials felt, however, that their operations were at the mercy of British diplomacy, which had long been paramount in most of the Persian Gulf region. Great Britain had acquired the right to supervise the foreign relations of many of the small Arab states. U.S. oil companies wanted the support of the U.S. Government to insure that their oil concessions would not be impaired by British diplomacy.

The U.S. Government's Inter-Departmental Committee on Petroleum Policy (composed of representatives of the Departments of State, War, and Navy and the Petroleum Administrator for War) was established to keep informed of international oil matters and to formulate policy and suggest actions on the future American oil position. How best to help the American oil companies in the Middle East became the most important concern of this group.

In early 1943 the Arabian-American Oil Company (a consortium of major U.S. oil companies) offered the U.S. Government an option to buy at a discount a great quantity of Saudi Arabian oil whenever it might choose. Until wanted, the oil could remain underground. The company would see that enough would always be available to meet a Government requisition; the company was sure that there was more oil underground than could be sold during the life of the concession.

This offer, apparently prompted by the wish to gain a semiofficial status for the concession, would be a trade of shares in the oil company in return for protection. The arrangement would show the importance the United States placed on the Saudi oil and would indicate that the United States considered this oil as part of its military reserves.

The President authorized the trade in July 1943. The purchase was to be made in the name of the Petroleum Reserves Corporation (an organization created to manage the activities of the U.S. Government in foreign oil matters). However, the consortium withdrew the offer before the formal completion of

the arrangements. The apparent reasons included fear of Government dominance; no obvious cash profit; expectation that the Government would still be concerned with the protection even without sharing ownership; and fear of becoming suspect in the eyes of other governments and at odds with all other U.S. oil companies.

In February 1944 the owners of the Arabian-American Oil Company and the Petroleum Reserves Corporation agreed in principle to the construction of a major pipeline system from the oilfields of Saudi Arabia and Kuwait to the eastern end of the Mediterranean Sea. The plan was rejected because of opposition by the American oil industry and the U.S. Senate.

In August 1944 the United States and Great Britain signed a petroleum agreement to promote an orderly development of the international oil trade to insure (1) equal opportunity in the quest for new concessions and (2) adequate supplies of oil to all countries. The agreement, subject to ratification by both Great Britain and the United States, encountered considerable opposition in the U.S. Senate and from the oil industry; as a result, the United States withdrew from the agreement.

A new agreement with Great Britain was signed in September 1945 and submitted by the President to the Senate for its advice and consent to ratification. The agreement encountered opposition in the Senate and from the U.S. oil industry, and the Senate took no positive action on it.

DEPARTMENT INFLUENCE IN RECENT OIL CONTRACT NEGOTIATIONS

The Department consciously avoided involvement in the details of the recent major oil contract negotiations but helped to insure that negotiations were successfully completed. The Department assisted in developing a climate conducive to successful negotiations between U.S. oil companies and oil-producing countries.

Officials indicated that the Department frequently discussed major issues with oil companies and foreign officials. However, when the Assistant Secretary of State for Near Eastern and South Asian Affairs was asked about his office's role in a recent oil negotiation settlement, he testified that:

"We have not and do not intend to take any substantive position on the negotiations * * *. If you are talking about U.S. really developing a substantive proposal, so to speak, and actually becoming part and parcel of the substantive negotiations, the answer is no."

SIGNIFICANCE OF THE AGREEMENTS

Although OPEC was established in 1960, it did not use its combined bargaining power effectively until 1970. Previously the international oil companies had operated essentially under a concession-type arrangement which allowed them to exploit a country's oil reserves, without production limitations and with nominal tax payments, for the time set in the agreement. Some of these agreements, canceled by the new agreements in 1971 and 1972, would not have expired for another 20 to 40 years.

Acting in concert, the exporting countries have negotiated eight agreements with oil companies that have significantly increased the cost of crude oil. As a result of the 1971 agreements, and taking into account production increases in the Middle East, revenues of these producing countries by 1975 will probably more than double the 1970 revenues. These agreements, though affecting different countries, were negotiated at approximately the same time, and the negotiations significantly influenced each other. Probably the most important agreement was the one which provided for the exporting country's participation or part ownership in the companies' operations.

We reviewed the Department's position and actions on the agreements listed below.

Date	Agreement	Exporting countries involved
Feb. 1971	Tehran	Abu Dhabi, Iran, Iraq, Kuwait, Qatar, and Saudi Arabia
Apr. 1971	Tripoli	Libya
June 1971	East Mediterranean	Iraq
Jan. 1972	Geneva	Abu Dhabi, Iran, Iraq, Kuwait, Qatar, and Saudi Arabia
Dec. 1972	OPEC Participation	Abu Dhabi, Kuwait, Qatar, and Saudi Arabia

Although not all companies were involved in all of these agreements, the major companies participated in most. For example, Mobil, Shell, Standard Oil of New Jersey (Exxon), and British Petroleum were involved in all five agreements,

while Texaco, Gulf, and Standard Oil of California were involved in four.

The Tehran Agreement raised the basic posted price of oil 35 cents a barrel. This followed a 9 cents a barrel raise negotiated in 1970. Additional increases for inflation and the rising demand for oil were established in four increments for the 5-year life of the agreement. The agreement also increased the host countries' taxes from 50 to 55 percent of net taxable income and established a system for adjusting the posted price according to the oil's specific gravity.

In the Tripoli and Eastern Mediterranean Agreements, the OPEC countries involved used the Tehran Agreement as a base and added to it by raising the basic posted price, getting a further increase for low-sulfur oil, and securing temporary increases to reflect (1) their geographical advantage while the Suez Canal was closed and (2) the high freight rates prevailing for oil tankers. All three agreements represented major achievements by OPEC countries and significantly increased the revenues of three countries.

The Geneva Agreement and the OPEC Participation Agreement were unlike the previous three. The Geneva Agreement increased the posted price to restore to the oil-producing countries the purchasing power lost because of the 1971 U.S. dollar devaluation. As described in chapter 3, the Participation Agreement provided the host countries with a 25-percent interest in the companies' ownership, increasing gradually to 51 percent by 1983. The countries have 2 years to pay the oil companies for their share of production. The added revenues from participation should allow all the host countries to meet compensation payments from their share of earnings. Thus, they can acquire control without expending any of their own money.

Negotiation of the Tehran Agreement

At an OPEC conference December 9 to 12, 1970, it was decided to initiate negotiations between the six Persian Gulf members and the oil companies within 31 days. On January 8, 1971, the U.S. companies advised Department officials that they did not believe they would be prepared to start negotiations by January 12, 1971.

The basic dilemma of the oil companies' representatives was the risk of offending OPEC either by requesting postponement of the negotiations or by beginning talks on a false basis. Department officials voiced their concern about the adverse effects of postponed negotiations. However the next day, the Department asked the U.S. Embassy in Tehran to explain to the appropriate authority that the companies were having genuine difficulties in reaching a joint negotiating position and to urge the countries not to overreact to any delays.

On January 10 the Shah of Iran and the Saudi Arabian Oil Minister threatened to stop production if OPEC demands were not met. The discussions did open on January 12, 1971, as planned but broke off after only 2 hours. No negotiations took place; the company representatives wanted only to obtain further information about OPEC's demands.

The oil companies agreed among themselves to negotiate only on the basis of reaching a 5-year settlement simultaneously with all producing countries concerned to avoid the leapfrogging effect of a series of agreements and to promote stability in the oil industry.

On January 16, 1971, the oil companies issued a joint letter notifying OPEC countries of their desire to negotiate a 5-year pact. At the same time, the U.S. Government stressed to OPEC officials that the United States

--believed the industry statement provided a basis for negotiating an equitable settlement for oil pricing in all OPEC countries,

--trusted that OPEC countries would give the industry an opportunity to discuss and negotiate the details of these proposals, and

--trusted that no hasty or arbitrary actions would be taken which could damage the interests of all parties involved.

Libya and Algeria issued a joint communique denouncing the oil companies' request of January 16, 1971, for collective bargaining. This made it evident that the Tehran negotiations would be limited to the six Persian Gulf countries.

The Under Secretary of State met with the heads of state of Iran, Saudi Arabia, and Kuwait and other high-ranking officials in those countries. Although details of the negotiations between the parties directly involved were not discussed, these leaders indicated that they had not been treated fairly by the oil companies over the years. This, plus a greater sense of solidarity and strength because of their OPEC memberships and the world oil situation, was the reason they were ready to stand up to the oil companies in negotiations.

In briefing industry representatives on the results of the Under Secretary's trip, a Department official stated that the Under Secretary had succeeded in impressing on the three rulers the seriousness with which the U.S. Government would view any cutoff of oil supplies for Europe and had clearly pointed out that the U.S. Government viewed the industry offer as a reasonable basis for negotiations. This Department spokesman reported that any agreement reached would be binding for the life of the agreement regardless of the terms of settlement reached in Libya or elsewhere in OPEC. He stressed that these assurances were made by the heads of state to a Presidential envoy and thus were very different from previous assurances given to the industry.

Talks between the OPEC negotiating committee and the company representatives were resumed on January 19, but the Gulf countries set a February 3 deadline for an agreement.

As the deadline drew near, industry representatives expressed grave skepticism about the negotiations. On January 31, 1971, they presented a counterproposal short of OPEC demands but feared the offer would be rejected, negotiations broken off, and oil exports suspended as early as February 1.

At this point, the U.S. Government position, according to a Department message, was:

--"The Government continues to fully support the coordinated approach by companies and governments of consuming countries in the oil negotiations and will promote this end wherever possible, including through OECD [Organization for Economic Co-operation and Development]."

--"The Government is in no position to judge whether the oil companies' offers to the Persian Gulf countries are reasonable or not under present circumstances. If companies believe they can make no further offers and must break off negotiations (with all the consequences that may ensue) that is for them to decide."

--"The Government is equally in no position at this time to say what its position would be in regard to hypothetical marketing arrangements and other commercial matters, should the Persian producers take drastic action."

--"The Government will of course remain in close communication with companies and governments and will continue to consult with the parties concerned as the situation develops."

On February 1, negotiations did break down because the companies considered OPEC's demands too great and the deadline too stringent. The Iranian Government was advised of the U.S. Government's concern about the oil talks because, if the talks broke off and OPEC took unilateral action, there would be major repercussions. The Saudi Arabian Government was informed that the United States Government, although not involved in the negotiations, was deeply concerned with the apparent breakdown and that it was convinced more time was needed to discuss these complex matters. In addition, Saudi Arabia's representatives were advised that the U.S. Government could not involve itself in the details of such aspects as price or weights of crude oil but wanted Saudi Arabia to be aware of U.S. concern with the underlying fundamentals. The Department's view was that no further Government approaches should be made unless a breakdown of negotiations was imminent.

On February 4, 1971, the oil companies sent a message to the OPEC countries urging that no immediate and irrevocable action be taken and that further negotiations could still produce a satisfactory settlement. At a meeting in London the next day, Embassy officials suggested to one of the oil company representatives that the companies prepare a more effective and simple presentation on their case concerning assurances. Department officials in Washington

met with oil company representatives on February 9 and repeated the Department's view that it would be highly desirable for companies to continue negotiations. The consensus of the companies was that they must make a new and improved offer before the February 15th deadline.

Just 3 days before the deadline, the oil company representatives stated that freight differentials were the most important unsettled element. The companies felt that the time might come in the next few days when the United States and Great Britian should intervene with the Government of Iran. Since the issues had been taken up informally, it was not felt that any formal demands could be made.

On February 13, 1971, U.S. company representatives stated that they expected an agreement to be reached within a day and suggested that, after its announcement, the United States should express gratification to the Persian Gulf countries that the negotiations were successful and would provide stability for 5 years. The agreement was signed on February 14. Two days later a Department spokesman in Washington said that, considering all the circumstances, the United States felt that a most satisfactory agreement had been reached. The Iranian Prime Minister expressed great appreciation for the U.S. attitude and position concerning the negotiations.

In October 1973 the Tehran Agreement was virtually scrapped when new price negotiations were broken off by the six Persian Gulf members of OPEC who had signed the agreement. This was immediately followed by a price increase which oil companies stated was a unilateral increase of about 66 percent. One oil company spokesman stated:

> "The effect of this decision would be to raise posted prices of gulf crude oils by about $2/bbl [barrel]. Income tax and royalty payments to producer governments would rise from about $1.75/bbl to about $3.00/bbl."

Negotiation of the Tripoli Agreement

In September 1970 Libya used the threat of nationalization on Occidental Petroleum (a major producer in Libya but with little production outside) as a means to secure a price increase. Then, using Occidental as a precedent,

Libya forced increases on other independent oil companies. Citing these increases as precedent, Persian Gulf oil-producing countries secured additional increases in November 1970.

On January 2, 1971, the Libyans claimed that the November 1970 increases given the other countries entitled Libya to further increases. This leapfrogging effect was the prime reason that the oil companies wanted a comprehensive 5-year settlement with all the OPEC countries during the Tehran negotiations.

U.S. representatives then met with Libyan officials to probe their timing and demands and to encourage them to give the companies time in their bilateral talks to develop a position responsive to the OPEC resolutions. Libya refused to negotiate, wanting only acceptance or rejection of its demands by January 16, 1971.

On January 8, 1971, the President of Occidental stated that Occidental would need help if the major oil companies wanted his company to stand firm in the negotiations in Libya. The next day Occidental representatives in Tripoli met with Libyan officials, who demanded even greater increases from Occidental and Bunker Hunt Petroleum Companies than those demanded on January 2.

On January 15, 1971, 1 day before the deadline set by Libya, the oil companies approved a production-sharing agreement aimed at helping companies, such as Occidental, if their production were shut down in Libya and enabling companies to form a united front to resist Libyan divide and conquer tactics. The companies briefed the Secretary of State on the problems involved, but the deadline passed without incident.

Libyan officials stated on January 20 that they would negotiate on terms applicable only in Libya. Libya's increased demands came when talks were about to begin in Tehran. The oil companies, anxious that these talks not be jeopardized, sought Department of State assistance to dissuade the Libyan Government from any precipitous action. Libya maintained that its desire was to negotiate with one company at a time but suggested its willingness to conduct negotiations with one company which was tacitly understood to be acting as the industry leader.

When the Tehran Agreement was signed on February 14, Libya's reaction was to declare firmly that the terms did not meet even its minimum expectations.

One week later, officials from Algeria, Saudi Arabia, and Iraq met with Libyan officials to assist in Libya's negotiations with the companies. Libya then threatened production cutoffs by all four countries to obtain its demands. It should be noted that Saudi Arabia and Iraq had signed the Tehran Agreement and had given assurances against production cutoff. Finally, on April 2 Libya and the oil companies reached an agreement.

Negotiation of the Eastern Mediterranean and Geneva Agreements

The Department had very little influence in the Eastern Mediterranean Agreement. U.S. diplomatic relations with Iraq had been broken off and the U.S. Embassy in Baghdad officially closed since 1967. As a result the oil companies had to negotiate the Eastern Mediterranean Agreement with Iraq without assistance from the Department.

The Geneva Agreement was designed to restore to the oil-producing countries the purchasing power lost because of the devaluation of the U.S. dollar.

Because oil companies paid oil taxes and royalties due either in U.S. dollars or a stated dollar equivalent, a devaluation of the dollar meant that producing countries received an amount of currency which would buy less on the world market. From August 15, 1971, the date of devaluation, until the agreement was signed on January 20, 1972, the oil companies had enjoyed a windfall profit because oil prices in Europe and Japan remained stable. The oil-producing countries sustained losses on the revenue received in the form of reduced purchasing power. The Geneva Agreement added about $670 million in revenues to the Persian Gulf countries. Department officials believed it was better to remain out of any negotiations on this matter because they felt that the U.S. Government had no effective leverage.

On March 22, 1973, the major oil-exporting countries decided to seek increased payments from the oil companies to compensate for the latest devaluation of the U.S. dollar.

Negotiation of the OPEC Participation Agreement

After years of discussions among the OPEC countries on how to better control the rewards from their oil resources, OPEC members announced publicly at their conference that they would discuss participation with oil companies in early 1972. Following the conclusion of the Geneva Agreement in January 1972, the oil company representatives and members of OPEC began discussions on the demands for participation in the companies. The Saudi Arabian Minister of Petroleum negotiated on behalf of OPEC. The companies originally held that OPEC's demands for participation were confiscatory and could not serve as a basis for opening discussions. The OPEC representative threatened that, if the companies were not prepared to negotiate, participation would have to be legislated on them. To break this initial impasse, the companies then proposed a form of partnership in concession areas that had undeveloped oil reserves.

Although the offer was rejected, Department officials felt that it represented a serious effort to start negotiations and that it was in line with the Department's previous recommendations that the companies take constructive steps in the negotiating dialogue. The companies then asked for Department assistance in dealing with this problem.

In February 1972 the U.S. Government pointed out to Saudi Arabia (1) the importance of successfully resolving this issue and (2) the feeling that participation on OPEC's terms would undermine the stability of the oil industry, which was insured in the previous agreements. Saudi Arabia was urged to start constructive negotiations, considering the companies' new and constructive proposal.

The Department believed that presenting U.S. views would help avoid a negotiating impasse and that the companies and major Persian Gulf countries would eventually be able to reach an agreement without a major crisis.

The Department's position, according to an intradepartmental message, was:

> "We continue to believe that companies will inevitably find it necessary to accommodate political

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> forces behind participation moves. We have urged them to take [a] constructive approach and believe that proposals to Saudis and Iranians are first steps in [the] right direction. On [the] other hand, removal of U.S. companies from control of investment and production decisions could have an inevitable harmful effect on U.S. balance of payments and if precipitated through a crisis in negotiations, [it could have] a serious disruptive effect on stability and required expansion of world oil supplies. The United States Government is continuing to urge both sides to engage in constructive negotiations. We believe present OPEC demands for participation and compensation would drastically change the financial relationship between governments and companies. In our view, this change in relationship would be contrary to the terms of the Tehran Agreement, which promised stability in oil relationships for the five year period of the agreement. Should therefore OPEC insist on implementation before [the] Tehran Agreement expires, we believe it may be necessary to remind signatories of their commitments."

On March 10, 1972, the oil companies having concessions in Saudi Arabia accepted in principle the 20-percent-participation demands. The companies did not state, however, their position on the timing for participation, amount of compensation, disposition of the host government's share of production, future financing requirements, and assurances for the future. Department officials indicated that, while it was obviously impossible to predict the outcome, the decision seemed correct and the companies had chosen the least undesirable alternative. The companies' decision came after failure to block the participation push.

Qatar's Petroleum Director and OPEC representative subsequently stated that Qatar expected oil companies to move toward 20-percent participation along the lines of the commitment in Saudi Arabia. The Petroleum Director said he hoped the United States would help Qatar pressure the companies if necessary. However, the U.S. Government indicated that, because of the importance of the international petroleum industry, it placed great emphasis on the maximum degree of cooperation between all parties.

By March 20, 1972, the oil companies had informed Iraq, Qatar, Kuwait, and Abu Dhabi of the companies' readiness to accede to the governments' wishes to acquire 20-percent participation.

During the first round of participation negotiations, which began on March 20, the Minister of Saudi Arabia asked whether the oil companies thought the government or a national oil company should be the shareholder. He stressed that, whatever arrangement was worked out, Saudi Arabia had no intention of paying U.S. taxes on any dividends it might receive. The main outcome of the meeting was the decision to hold additional meetings.

Although limited progress was being made at these meetings, the countries became disturbed by the Secretary of the Treasury's statement to the House Committee on Interior and Insular Affairs that U.S. companies were seeking deals with other countries and were negotiating with foreign governments as though they were on a par. No company, he said, can deal with foreign governments on an equal basis. He recommended more U.S. Government involvement.

By the end of May, little substantive progress had been made. OPEC had pushed for (1) company acceptance of the principle of eventual assumption by the governments of 51-percent participation and (2) the immediate entitlement to oil equal to their equity participation. The companies were resisting both demands but were aware that the issue could become political if no progress was made by the end of June (the next scheduled OPEC conference).

As the OPEC conference drew nearer, terms of a participation agreement were not settled but progress was made. On the question of the timetable for 51-percent participation, oil companies indicated readiness to make commitments if the terms and guarantees were satisfactory. Compensation to the companies for host-government participation was the point of major disagreement. The companies and OPEC had also been unable to agree on the form participation should take--stock of the in-country company, share of oil production, or share of the profits.

At the conference, OPEC warned that, if the negotiations on participation failed, "definite concerted action" would

be taken by the member countries concerned and would be supported by all member countries. This presumably meant acquisition of at least 20-percent participation through legislation.

After the conference, the Secretary General of OPEC stated that, if oil companies did not come up with an acceptable participation formula, there would be wholesale nationalization. He said OPEC preferred a mutual agreement but would use the sovereign legal route if necessary. If this happened, he added, few countries would be satisfied with only 20 percent.

Subsequently, Saudi Arabia approached the United States to encourage the oil companies to be flexible in their negotiations. This was the first time Saudi Arabia asked for U.S. Government intervention in negotiations. The Deputy Minister of Petroleum (the King's son), while on a visit to the United States in July 1972, conferred with various U.S. officials involved in the energy field to explain his government's position on participation. In response, the Saudi Arabia Government was told of the need for reciprocal flexibility by the OPEC countries to provide fair compensation for participation.

An oil company representative then suggested the possibility of sending a Presidential envoy to see the King to indicate the depth of U.S. feelings on compensation because the only way to make sure the King knew the U.S. views was to send an envoy. The Department of State advised the company representative that the idea of sending an envoy was a poor one.

On August 31, 1972, oil industry representatives reported that, although no agreement had been reached, talks were constructive and, compared to previous meetings, some progress was being made.

During a visit to the United States in September, the Saudi Arabian Minister of Petroleum was advised that the U.S. Government did not wish to get involved in the details of the compensation to be given companies in return for host government participation but did want to be sure that compensation was recognized as fair and equitable.

The Minister stated that only a few obstacles remained and these could be resolved. He concluded that an agreement could be the starting point of a new relationship between the oil companies, the producer governments, and the consumers and that full cooperation among all three would be needed to achieve stability.

The Minister was informed of the U.S. Government's concern about the attitude of other OPEC members. Given OPEC's support for the law of changing circumstances, the United States hoped other OPEC members would accept the results of the negotiations and not try to disrupt them.

On October 5, 1972, an agreement was initialed in New York City by company representatives and the Saudi Arabian Minister of Petroleum acting on behalf of the four OPEC countries involved. The agreement, subject to final approval of the rulers of Saudi Arabia, Qatar, Kuwait, and Abu Dhabi, was broad and left considerable scope for details for each country.

After an OPEC conference on October 27, Saudi Arabia, Kuwait, Abu Dhabi, and Qatar announced their willingness to become parties to the proposed agreement. On December 20, 1972, the agreement was signed.

The only surprise in the final agreement was that the host governments' initial share would be 25 percent, instead of the 20 percent agreed to in principle at the start of negotiations. The change apparently occurred during final negotiations. The agreement also provided for government majority ownership (51 percent) of producing concessions by 1983.

CHAPTER 5

ATTEMPTS AT GOVERNMENT-TO-GOVERNMENT OIL AGREEMENTS

The Department of State has tried to negotiate bilateral treaties with several Western Hemisphere countries. Department officials have also been (1) exchanging information, (2) discussing energy problems with other major oil-consuming countries, mainly through OECD, and (3) trying to conclude formal agreements with other major oil-consuming nations to develop alternate sources of energy and multigovernment contingency plans in case of supply disruption.

However, the United States has not concluded any firm agreements with friendly oil-producing countries to secure a continuing supply of oil.

DEPARTMENT EFFORTS CONCERNING OIL AGREEMENTS WITH PRODUCER COUNTRIES

The Department does not have the sole prerogative to initiate negotiations for government-to-government agreements. Such actions must be carefully coordinated with many other U.S. Government agencies.

However, the Department has followed a policy of striving to secure agreements with Western Hemisphere countries for national security reasons, and, at the same time, it has avoided formal agreements with Eastern Hemisphere countries on the grounds that it would create difficulties with oil-consuming allies. The Department has been unable to conclude any agreements with Western Hemisphere countries although Eastern Hemisphere countries have approached the United States with proposals for bilateral oil agreements.

In 1959 the President stated:

> "The United States recognizes, of course, that within the larger sphere of free world security, we, in common with Canada and with the other American Republics have a joint interest in hemisphere defense. Informal conversations with Canada and Venezuela looking toward a coordinated approach to the problem of oil as it relates to

this matter of common concern have already begun. The United States is hopeful that in the course of future conversations agreement can be reached which will take fully into account the interests of all oil producing states."

Nevertheless, the U.S. Government maintained a low profile in foreign petroleum matters until 1970, preferring to allow oil companies to determine U.S. oil-related policies.

On February 20, 1970, the President, recognizing that all the members of the Cabinet-level Task Force on Oil Imports had agreed that a unique degree of security could be afforded by moving toward an integrated North American energy market, directed the Department to:

--Continue to examine with Canada measures for a freer exchange of petroleum, natural gas, and other energy resources.

--Explore more fully the possibility of reaching an agreement on the exchange of energy with Mexico.

--Continue consultations on petroleum with Venezuela and other Latin American suppliers who proved to be secure and dependable sources of oil during the crisis after World War II.

--Review with producing nations of the Eastern Hemisphere, and our NATO allies and Japan, the findings and recommendations of the Cabinet-level Task Force on Oil Imports.

In line with the President's directives, the Department renewed its efforts to achieve bilateral oil agreements. The following sections outline the situation with several Western Hemisphere countries supplying oil imports. We have also included a section concerning Saudi Arabia, which was one of two Eastern Hemisphere countries to recently propose a bilateral oil agreement with the United States. An Iranian proposal, similar to the Saudi proposal but made several years ago, was not pursued, according to Department of State officials, because it was not feasible at that time in view of existing U.S. import quotas. At the time of our review, newspaper articles indicated that Abu Dhabi was preparing to make a similar offer.

Canada

Canada in early 1973 was providing about 23 percent of U.S. oil imports. Department officials have been striving to come to an equitable agreement for increasing U.S. oil imports from Canada. However, because eastern Canada depends entirely on imported oil, some arrangement is needed which considers the security needs of both countries.

The President, in his energy message of June 4, 1971, referring to the increasing energy trade between the United States and Canada, stated that the time had come to develop further this mutually advantageous relationship. He added that the United States was prepared to move promptly to permit Canadian crude oil to enter the country, free of any quantitative restraints, upon agreement as to measures needed to prevent oil shortages in either country. In early 1973, Canadian and U.S. representatives met to discuss an oil sharing plan for application during supply emergencies. To date no formal agreement has been reached on either, and over 13 years have passed since the United States recognized the need to reach an agreement with Canada. Canada's growing need for its own oil, its spirit of nationalism, the desire to conserve this wasting asset, and its concern about encroachment by foreign capitalists are obstacles to negotiating an arrangement.

In February 1973 the Canadian Government announced that it was imposing controls on oil exports to the United States beginning March 1. According to the Canadian Energy Minister, the U.S. demand for Canadian oil had strained its oil production and transportation system and threatened the continued supply to Canadian refiners dependent on such supplies. The controls were labeled interim, and a long-term policy was to be determined after public hearings and a cabinet study.

We were unable to review this situation in depth because Department officials felt that we should not have access to records dealing with Canada in view of the ongoing discussions.

Venezuela

The United States imported about 62 percent of Venezuela's 1972 oil exports. This accounted for about one-third of all U.S. petroleum imports and 10 percent of U.S. consumption. However, the oil companies have little incentive to invest

the large sums needed to sustain or increase conventional oil outputs because most oil concessions will revert to the host government between 1983 and 1985 under the Petroleum Assets Reversion Law of 1971. Although production has already peaked out, Venezuela is expected to continue to provide an important part of U.S. oil requirements from its conventional sources. No efforts are being made to consummate a government-to-government agreement for a guaranteed supply of conventional petroleum.

A second source of a large supply of petroleum lies in Venezuela's tar sands area. Although it has not been exploited because extraction costs are estimated to be much higher than those for conventional oil, several U.S. oil companies have indicated considerable interest in developing this alternative source.

With the substantial funding and the long leadtimes required to reach full production, oil companies wanted assurances that their investment in tar sands production would not be nationalized in 1983, along with the conventional petroleum concessions, or at some later date. Thus, the United States began discussing with Venezuela a government-to-government treaty for developing the tar sands oil (heavy oil). In return for investment and other assurances, the United States would provide the Venezuelans with preferential treatment in the U.S. market. We were advised by a Department of State official in January 1974 that such a treaty is not imminent under the present conditions.

Other Latin America countries

Although formal oil arrangements have been informally proposed for Colombia and Ecuador, no sustained negotiations have taken place. Ecuador has the second largest oil reserves in South America and it has recently completed a major oil pipeline with a capacity of 250,000 barrels a day. Despite the potential in Ecuador, U.S. officials have stated it is unlikely that Ecuador will respond to a treaty proposal before observing the course followed by Venezuela. The United States has not raised the question of a treaty with either Ecuador or Colombia since the informal proposal in September 1972.

Although Colombia is presently an oil exporter, its proven oil reserves are limited to such a degree that it will become a crude oil importer by 1975 or 1976 and a large-scale importer by 1980, unless large new discoveries are made.

Saudi Arabia

In September 1972 the Saudi Arabian Minister of Petroleum informally suggested a bilateral commercial oil agreement with the United States. The agreement would exempt Saudi oil from U.S. restrictions and duties and encourage the increasing investment of Saudi capital in marketing the oil, thus practically guaranteeing its continuous flow to the United States.

Although no further discussions on the matter have developed, the U.S. Government has considered the proposal but has made no decision to pursue it.

The purpose of the Saudi offer was to gain experience in all aspects of the international oil industry and to associate itself closely with the only country it believes can give it adequate political and military support. The other oil-consumer nations, including those in Western Europe and Japan, are undoubtedly anxious to conclude agreements with Saudi Arabia. Several countries have approached it hoping they would receive similar offers, but Saudi Arabia was primarily interested in the security the United States could provide.

Such an agreement would help the United States overcome major objections to increased imports because:

--The balance-of-payments problems could be met by Saudi investment in the United States.

--The security problem could be at least partially overcome by presumed Saudi reluctance to cut off deliveries to its own partners.

--The United States could secure the necessary energy for the next two decades.

According to U.S. officials, the proposal has hazards. It would be contrary to the General Agreements on Tariffs and Trade; it could start competition among the other consumer

nations; prices could rise drastically; and other oil-producing countries already supplying the United States would seek U.S. trade and aid benefits similar to those given Saudi Arabia.

U.S. officials have indicated that they would welcome Saudi investment in the United States. But awarding Saudi Arabia special preference, according to Department officials, would cause other oil-exporting countries to seek similar preferences, especially Western Hemisphere countries which have enjoyed certain U.S. preferential treatment in the past. It should be noted that the elimination of U.S. oil import quotas met one of the objectives sought by the Saudi Minister of Petroleum in his proposal.

U.S. officials believed that a formal and exclusive agreement could set off a dangerous and cutthroat scramble by other consumer countries for available oil supplies. Therefore, they believed that a specific agreement was not necessary and that the free enterprise system would encourage the development of the proper relationship.

Although U.S. officials are aware that other consumer countries have negotiated agreements with several producing countries, they still believe the major consumer countries must work together to protect themselves and the interests of the underdeveloped non-oil-producing countries.

OTHER COUNTRIES HAVING AGREEMENTS
FOR A CONTINUING SUPPLY OF OIL

Although the United States has suggested avoiding formal oil agreements to prevent cutthroat competition, several consumer countries have already negotiated agreements and barter arrangements with oil-exporting countries. This has been done, either directly or through controlled or nationalized companies, to secure at least a portion of their petroleum requirements. For example:

--Iraq has individual oil sales or barter arrangements with France, Italy, the Soviet Union, East Germany, Spain, India, and Brazil.

--The Soviet Union has concluded a technical assistance agreement with Libya. The Soviets will provide petroleum technicians and training personnel and will buy crude oil. Libya has also made a few other small barter arrangements with the Soviet Union.

--Brazil has arrangements with Bolivia, Venezuela, and Iraq for the exploration for or purchase of petroleum and is negotiating with the Soviet Union to secure supply sources.

--Iran has a $200 million barter deal with Czechoslovakia which will involve about 20 million tons of crude oil during this decade.

--Spain and the Soviet Union have agreed to a barter deal including oil.

--Japan has oil arrangements with Kuwait, Indonesia, China, Abu Dhabi, and the Soviet Union.

Now a U.S. oil company is negotiating a special agreement with Iran and, according to Department of State officials, other U.S. firms are seeking similar arrangements in producing countries.

POTENTIAL CUTTHROAT COMPETITION AMONG CONSUMER NATIONS

Many consider petroleum to be the most political of all commodities because the economies of all industralized nations depend to a large degree on it. According to Department officials, with the expected substantial increase in the worldwide use of oil and the declining number of petroleum sources, consumer countries could begin intense competition with each other by bidding for the limited supply of oil and thus drive the price to exorbitant heights.

During hearings held by the Subcommittee on Foreign Economic Policy, House Committee on Foreign Affairs, in September 1972, a Department official testified that:

> "Our oil importing allies are disturbed by the unexpected rate with which our oil imports are increasing; their concern is heightened by the fact that this growth is occurring at a time when there is already considerable concern over the availability of satisfactory supply to meet their own demands of the next decades. They fear our buying power, and suspect that the American companies which dominate the international oil industry will take care of American needs first and at their expense. These are important and sensitive concerns which we must take very seriously into account as we enter into a new era of multipolar diplomacy in which our relationships with our NATO and OECD colleagues will be repeatedly tested. We believe the United States must show leadership in seeking to avoid a situation which could touch off a scramble for energy supplies among the importing nations."

OIL COMPANIES AS BUFFERS BETWEEN PRODUCING AND CONSUMING NATIONS

In addition to supplying the technology and capital necessary to develop overseas oil sources, the oil companies, according to Department officials, have served as buffers between producing and consuming nations. This has helped to keep political ideologies from entering oil contract negotiations. Department officials believe it has kept the

industrialized nations from using their dominant world positions and military strengths to secure the needed oil on their own terms.

With the oil negotiations increasingly favoring the producing countries, the need for further consumer government support or influence in the negotiations becomes more obvious.

POTENTIAL FOR AGREEMENTS WITH CONSUMER COUNTRIES

The U.S. Government does not have any agreements with other major oil consumers, such as Japan, the United Kingdom, France, Germany, and Italy, to promote the closest possible coordination in developing alternative sources of energy or contingency plans in case of supply disruption. However, the United States and several other nations with large oil interests outside their countries have agreed to keep consumer governments informed on international oil developments.

The United States, as a member of the OECD, has used this organization as a forum to discuss the international energy problems. OECD consists of the 24 most industrialized free-world countries--including Germany, the United Kingdom, France, Japan, Canada, and the United States. The energy policies of member countries are reviewed at meetings of the Energy Committee, which attempt to harmonize and balance estimated trends of supply and demand in the energy sectors of member countries. The Oil Committee and its restricted-membership High Level Group have been the focal point for consumer country cooperation and have coordinated emergency measures during past oil crises, such as the Six Day War in 1967. They also review oil policies of member countries to detect any factors in the oil sector likely to affect general economic growth.

The United States has repeatedly outlined to OECD members its growing concern about the increasing reliance on imported oil and the potential effect on national security. The Department of State called for a cooperative rather than a competitive approach in dealing with oil-producing countries, while avoiding direct confrontation with the OPEC countries. But this and the important changes in the relationship between the OPEC countries and oil companies have not yet united the

consumer country governments concerning the producers. Other consumer governments are apparently less interested in supporting the predominately British, Dutch, and U.S. oil companies. As long as supplies do not appear seriously threatened, consumer governments seem to prefer leaving petroleum matters in the hands of the oil companies.

At the time of our review, OECD was striving to develop a scheme for apportioning available oil supplies in an emergency. Department officials have told us that they are currently engaged in a series of negotiations in the OECD which they hope will result in an OECD-wide sharing arrangement, on a basis acceptable to the U.S. Government. No agreement has yet been reached.

When OECD tried to establish an overall plan for joint action, problems arose. Much of the difficulty centered around how the OECD governments might assume a more active role in the oil company/OECD negotiations. One member country had suggested that the OECD countries be prepared to (1) indicate to the oil industry what was, and what was not, acceptable with regard to OPEC, (2) take the risk of a breakdown in oil deliveries, with recourse to the use of stockpiles, and (3) bring this viewpoint to the attention of the OPEC negotiators. Because finding common ground among the members became a problem, no action is expected on this proposal in the near future.

At U.S. urging, OECD agreed in October 1972 to modify its planned 2-year program of energy studies and to proceed on a priority basis with a preliminary assessment of the petroleum problem. This assessment, which was to be submitted by mid-1973 but was delayed until November 1973, would be used to formulate timely recommendations regarding the oil crisis. OECD members were told that the United States was formulating a plan, part of which would be the basis for cooperative action by OECD colleagues.

Although OECD provides member nations the opportunity to consult directly with each other on major issues, it has not yet shown the ability to formulate and execute a consolidated approach to the energy crisis.

CHAPTER 6

EMERGING ISSUES

The United States is expected to experience substantial balance-of-payments deficits as a result of oil imports, and oil-producing countries are expected to accumulate ever-increasing monetary reserves. Increased efforts to expand trade and investment opportunities are needed to overcome the problems which these significant deficits and reserves are expected to create.

ESTIMATED BALANCE-OF-PAYMENTS DEFICIT

Petroleum is already the largest single commodity being imported. According to Department of State officials, by 1985 the projected large increase in oil imports could be contributing about a $35 billion deficit to the annual balance of payments of the United States.

To pay for future oil imports, the United States will need to seek additional export markets for goods and services. Many of the more important oil-producing countries, however, do not have the populations or economic infrastructures to accept increasingly large imports. By 1980 the oil-producing countries in the Near East could be collecting oil revenues at an annual rate of about $63 billion. U.S. officials believe it would not be realistic to expect that an annual outflow of this magnitude would be offset by a corresponding inflow from export sales. One clear possibility is that these countries could become large equity holders in U.S. financial institutions and industrial complexes. The impact on the balance of payments can be measured by the fact that in 1972 the cost of oil imports equaled about 15 percent of our total manufacturing exports which totaled about $29.5 billion.

ACCUMULATION OF MONETARY RESERVES BY OIL-EXPORTING COUNTRIES

The following schedule shows the payments received by some Middle East oil-exporting countries since 1962.

Payments to Producing Countries

Year	Kuwait	Saudi Arabia	Iran	Iraq	Abu Dhabi	Qatar	Libya
	(millions)						
1962	$ 526.3	$ 451.1	$ 333.8	$ 266.6	$ 2.8	$ 55.8	$ 38.5
1963	556.7	502.1	398.1	325.1	6.4	59.5	108.8
1964	655.0	561.0	469.7	353.1	12.4	65.5	197.4
1965	671.1	655.2	522.4	374.9	33.2	68.5	371.0
1966	707.2	776.9	593.4	394.2	99.8	92.1	476.0
1967	717.6	852.1	736.7	361.2	105.0	101.8	631.0
1968	765.6	965.5	817.1	476.2	153.2	109.5	952.0
1969	812.2	1,008.0	937.8	483.5	191.1	115.2	1,132.0
1970	895.1	1,199.7	1,092.7	521.2	233.1	122.0	1,294.8
1971	1,395.3	2,159.6	1,869.6	840.0	430.7	197.8	1,766.0
Total	$7,702.1	$9,131.2	$7,771.3	$4,396.0	$1,267.7	$937.7	$6,967.5

These payments have, in many cases, been so large that the countries have been unable to spend the money earned and they have accumulated large monetary reserves. The chart on page 56 demonstrates how rapidly the monetary reserves of three countries, which have about half of the world's known oil reserves, have risen since 1966. As shown, Saudi Arabia's monetary reserves have quadrupled to approximately $3.15 billion in the last 2-1/2 years. These reserves will continue to increase rapidly unless Saudi Arabia significantly increases its operating budget or investments. The question of Saudi Arabia's investment is crucial because, if it cannot put a major portion of its growing income to a good use, it may well consider holding back on oil production to slow the increase of its monetary reserves and to conserve its oil. Inevitably, this would seriously disrupt the present world supply-and-demand cycle.

The following schedule indicates the importance of the oil-producing countries' monetary reserves by comparing them with those of the United States on a per capita basis.

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Per Capita Monetary Reserves of the United States
And Selected Oil-Producing Countries, June 1973

Country	Monetary reserves	Population	Per capita monetary reserves
	(millions)		
United States	$14,350	209.6	$ 68
Venezuela	1,865	10.8	173
Iran	1,188	30.7	39
Iraq	1,107	10.0	111
Kuwait	580	.9	644
Saudi Arabia	3,150	5.7	553
Libya	2,717	1.9	1,430
Nigeria	575	56.5	10

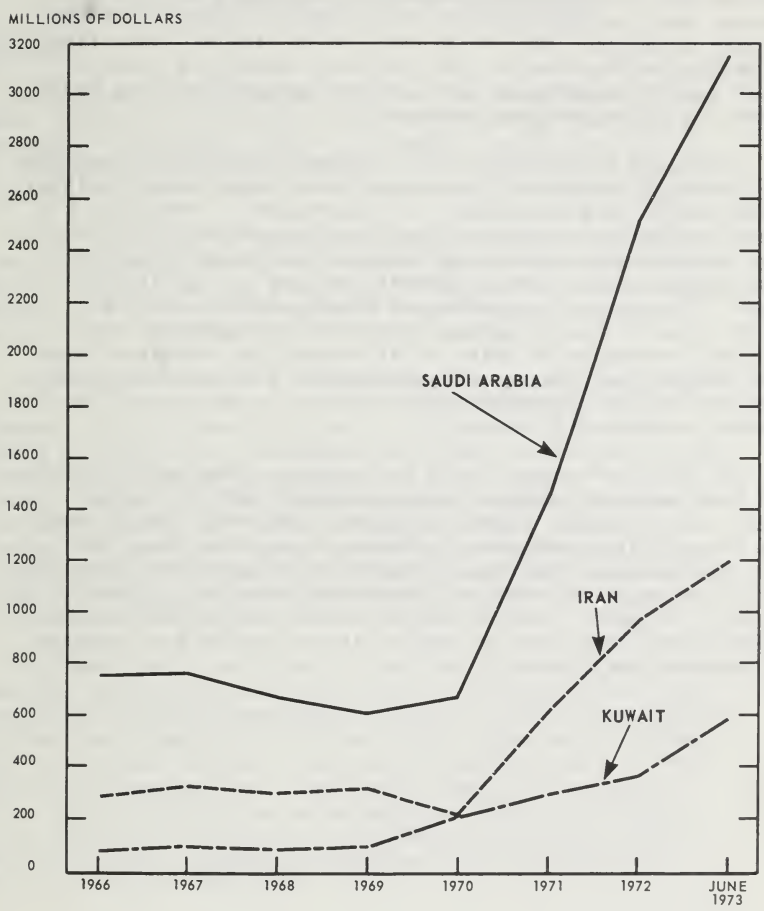
The United States, with a population of over 200 million people, has a per capita monetary reserve of $68, while five of the seven oil-producing countries listed have per capita monetary reserves ranging from 1-1/2 to over 20 times that of the United States. Arab oil-producing countries have 4.4 percent of the world's monetary reserves but have only 1 percent of its population. Knowledgeable authorities have calculated that these countries could control more than half of the world's monetary reserves in the coming decade. These countries have (1) funds available to invest in any conceivable enterprise at home and abroad and (2) the oil which will provide income for future investments. However, if satisfactory investment opportunities are not found, their monetary reserves may serve as a disincentive for increasing production and permit the Arab nations to use petroleum for political purposes.

OPPORTUNITIES FOR IMPROVED TRADE RELATIONS

U.S. efforts to expand trade relations with oil-producing countries have been limited compared with their rapidly increasing monetary reserves. With these potentially disruptive amounts of money and the U.S. balance-of-payments problems, increased trade would be mutually beneficial.

Saudi Arabia already has large monetary reserves and is seeking to convert this money into goods, services, and

FINANCIAL RESERVES OF COUNTRIES
WITH ABOUT HALF OF THE WORLD'S OIL



technology. It seems natural that, given our growing need for oil and their increasing desire for goods, services, and technology, arrangements beneficial to both parties could be made. Department officials, however, indicated that the problem was in developing methods to encourage key oil producers, such as Saudi Arabia, to at least maintain, and preferably increase, rates of production in view of their lack of motivation because of U.S. policies concerning Israel, their lack of absorbtive capacity for imports, and the rapid growth in their monetary reserves.

According to Department of Commerce publications, several oil-producing countries, including Iran, Iraq, Kuwait, Libya, Saudi Arabia, and Venezuela, are interested in obtaining U.S. goods and services--such as drugs and pharmaceuticals, factory construction, various metal goods and paper products, heavy-duty construction equipment, and various electronic items. Creation or expansion of foreign market sales will offset some of the projected balance-of-payments deficit. However, increases in sales to oil-exporting countries under free-market conditions are, according to U.S. officials, not expected to significantly offset the projected cost of the growing foreign oil imports.

The U.S. Government, with its various agencies, provides the best means to promote trade agreements for dissimilar goods and services. Other countries, including Italy, Japan, the Soviet Union, and Brazil, have already used their own government institutions as vehicles for negotiating trade and barter arrangements with oil-exporting countries. (See p. 49.) Although trade arrangements may not be the sole answer, they could offset some of the projected U.S. balance-of-payments deficit.

CHAPTER 7

CONCLUSIONS, AGENCY COMMENTS, AND MATTERS FOR CONSIDERATION BY THE CONGRESS

CONCLUSIONS

Petroleum is vital to our national security and economic growth. There is no adequate substitute to meet short- and intermediate-term needs. The U.S. supply cannot keep up with the rapidly expanding demands. The needs of our allies, as well as of other countries, are also rapidly increasing.

The availability of foreign petroleum products to the United States will, to a great extent, govern the future of industry, transportation, and way of life in the United States. Therefore, it is vitally necessary that national policy on energy be fully coordinated with U.S. foreign policy.

Oil companies, under a free-enterprise system, negotiate the terms of oil agreements with producer countries. The companies, however, have frequently called on the State Department and other U.S. Government officials to use political influence with foreign governments on their behalf. The Department, however, did not become involved in the substance of the oil agreements. It has established only general guidance for, and only broadly defined the responsibilities of, its overseas Missions for advising, assisting, monitoring, or otherwise watching over the practices and activities of U.S. business overseas.

The Department has tried to conclude agreements with Canada and Venezuela and to coordinate its efforts with those of other oil-consuming countries. However, Western Hemisphere countries cannot meet U.S. oil needs, and other major consuming countries have already negotiated agreements with certain Middle East countries for a continuing supply of at least a portion of their petroleum requirements. Department promotion of trade and investment arrangements with Middle East countries has been limited considering the large monetary reserves of these countries.

If future U.S. oil imports are to be insured, workable solutions based on mutual interests are needed for a variety of emerging foreign policy issues relating to oil. The United States must effectively coordinate its foreign policy with its energy policy.

In August 1973 we brought our findings to the attention of both the Department of State and the Office of Management and Budget and asked for their comments. We suggested that the Department of State play a major role in developing national policy on energy. We also made several proposals to the Secretary of State to point out specific areas where the Department's efforts could be strengthened. These proposals included enhancing its capability to analyze economic and security ramifications of oil negotiations; to influence oil negotiations; to lead in identifying potential trade and investment opportunities for dollar-rich oil-exporting countries; and to define responsibilities of overseas Missions for advising, assisting, and monitoring the practices and activities of U.S. business overseas.

DEPARTMENT OF STATE COMMENTS

In a letter dated September 19, 1973, the Department concurred in general with the basic conclusion of our report--the need for the Department to play a larger, and in fact a major, role in the rapidly evolving petroleum situation.

The Department said, in regard to that role, that:

--It has played and continues to play a major role in the development and implementation of national policy on energy imports.

--It led the efforts to alert the administration and the Congress to actions which should be taken if serious future shortages of energy were to be avoided.

--It provided guidance to the U.S. oil companies on U.S. policies on energy imports.

--It had intensive and frequent consultations with the oil companies during their negotiations on the major petroleum agreements.

--It had regular consultations, both bilateral and multilateral, with other concerned governments in producing and consuming countries to develop a climate conducive to successful negotiations between U.S. oil companies and oil-producing countries, while protecting U.S. national interests.

--A more active Department role in the negotiations themselves was inconsistent with traditional Government-business relationships, and it doubted that direct involvement of the U.S. Government in the negotiations would have enhanced the interest of the United States as a whole.

--Each issue and negotiation had a characteristic peculiar to itself and not amenable to other than very broad guidelines.

--It had recently augmented its staff in the Bureau of Intelligence and Research and was seeking a staff increase for the Office of Fuels and Energy in its budget for fiscal year 1975.

The Department said, concerning trade and investment, that:

--It was actively engaged, along with the Departments of the Treasury and Commerce, in developing opportunities for trade and investment outlets for the large monetary reserves now being rapidly accumulated by Middle East oil-producing countries.

--It intended to send teams of financial and trade experts to the major oil-producing countries in the near future to assist them in planning intelligent use of their growing financial resources, while also promoting U.S. investment and trade interests.

--It was substantially increasing its commercial representation in oil-producing areas for the dual purpose of expanding our exports and attracting investment, and it would propose a further expansion in fiscal years 1974 and 1975.

--It planned to create several new staff positions in the Middle East directed exclusively to the development of portfolio and equity investment in the United States.

--It had traditionally followed the practice of attempting to promote an environment conducive to U.S. private investment in foreign countries; but, because of the variety of circumstances in individual countries, it had established only general guidelines on the conduct and behavior of U.S. business abroad.

--General guidance to its Missions abroad concerning their responsibilities to and relations with U.S. commercial interests are contained in the Foreign Affairs Manual, and, when appropriate, specific guidance is provided to its Missions.

--The changing company role and the growth of large, multinational companies require a changing Government role, and this problem, as it relates to the major oil companies, is currently being explored both within the administration and with other concerned oil-consuming governments.

OFFICE OF MANAGEMENT AND BUDGET COMMENTS

On September 13, 1973, the Office of Management and Budget said that:

--The Department of State should, and already does, have a major role in developing national policy on energy imports to deal with the energy crisis.

--The Department should have adequate capability for comprehensive analysis of long-term economic and security ramifications of agreements negotiated between U.S. oil companies and foreign governments. The extent of that capability should be looked at in the context of the capability of other departments, agencies, and offices, including the Energy Policy Office.

--The implication that the Department has the authority to dictate the terms under which private firms dealing with foreign governments shall negotiate should be avoided.

--The Department's leadership in developing opportunities for trade and investment for the Middle East monetary reserves from oil sales should be exercised in conjunction with that of the Departments of Commerce and the Treasury.

--The Department should define the responsibilities of its Missions for advising, assisting, and monitoring the practices and activities of U.S. business overseas, including their role in oil negotiations.

--The balance-of-payments implication of increased oil imports is one of concern but should by no means be regarded as an insoluble problem.

ANALYSIS OF AGENCY COMMENTS

Our report does not deal with or call for direct Government involvement in oil negotiations but, rather, points to areas in which the Department could strengthen its capabilities to deal with the ramifications of the international oil situation. In view of the highly volatile situation which has emerged in the Middle East since the proposals were made, GAO is deferring specific recommendations to the Department at this time.

In the trade and investment area, satisfactory solutions will inevitably involve the U.S. Government, foreign governments, and the private sector, particularly multinational corporations. It is for this reason that we believe the Department should lead and coordinate the U.S. Government efforts. We intend to review separately the U.S. efforts in this area.

MATTERS FOR CONSIDERATION BY THE CONGRESS

During 1973 attention has been increasingly focused on the Nation's energy shortages and increasing need for petroleum imports. In October 1973, with the eruption of hostilities in the Middle East and the Arab curtailment of petroleum exports, the Department was thrown into a critical situation of trying to resolve issues connected with current and future flow of imports from the Middle East. This report discusses the Department's role in this evolving situation before the eruption of hostilities.

The fundamental issues involved in the international petroleum scenario, although altered somewhat by recent events, remain essentially unchanged. These issues involve

--the future availability of petroleum imports,

--agreements with oil-exporting countries,

--agreements with oil-consuming countries,

--outlets, such as increased trade and investment opportunities, for the increasing monetary reserves of oil-exporting countries, and

--the Department's role in negotiations between oil companies and producer countries.

Although the above issues will be influenced by world opinion and the overall Arab-United States-Israeli relationships, the issues, in and of themselves, must ultimately be dealt with. This report contains information on the issues which the Congress should find useful as it considers future energy proposals and programs.

APPENDIX

PRINCIPAL OFFICIALS RESPONSIBLE FOR THE ADMINISTRATION OF ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
DEPARTMENT OF STATE		
SECRETARY OF STATE:		
William P. Rogers	Jan. 1969	Sept. 1973
Henry A. Kissinger	Sept. 1973	Present
ASSISTANT SECRETARY OF STATE (BUREAU OF ECONOMIC AND BUSINESS AFFAIRS):		
Julius Katz (acting)	Nov. 1971	Feb. 1972
Willis C. Armstrong	Feb. 1972	Present

The Economic, Political, Military, Solution

(By Daniel Yergin*)

One might imagine that the summit meeting of the leaders of the Organization of Petroleum Exporting Countries [1]—now scheduled to convene in Algeria in a few weeks—will resemble a very satisfied board-of-directors meeting. As they look over the balance sheets of 1974, they cannot doubt that from their standpoint they made the right decisions. Their marketing strategy—quadrupling the price of oil—has brought them enormous new income as well as rapidly growing political power. Yet they face problems, and they must devise a strategy for protecting their great gains. They must worry not only about economic collapse in the industrial world, but also about possible responses of Western countries reeling from oil price hikes and unwilling to suffer the costs of collapse. Those responses, include military force, as U.S. Secretary of State Henry Kissinger suggested with his remark about "strangulation." It is possible that these OPEC "directors" may, after 16 months of exuberance, come to a more realistic assessment of the fact that, if events do come to a confrontation, their continued success is hardly a foregone conclusion.

Certainly, these leaders know as well as anybody that there is no long-term energy crisis, nor even a short-term petroleum shortage. What the West really faces is an OPEC crisis, that is, the problem of a monopoly—or to be more precise, an oligopoly—of the OPEC countries that can arbitrarily change the price of oil.

We can be reasonably confident that by 1980–81, OPEC's control over the oil pipeline will no longer exist. For if $11-a-barrel oil has brought new billions to the oil-producing countries, it has also made all kinds of energy sources—oil and non-oil alike—economic. The result has been an energy rush. Promising new strikes are constantly being reported all over the world—in Mexico, in the Irish sea, off the Florida coast, in India, off Brazil, and on and on. In addition, it is conservatively estimated that the North Sea and Alaska alone will be producing at least 4 million barrels a day by 1980. Many more producers will be competing for a share of the market in the nineteen-eighties. As The Economist of London pointed out recently, "It is now very difficult to see how anybody can write any economic equation predicting anything except a rather long-lasting glut of oil."

This means that the OPEC nations cannot enjoy their cartel for long. In effect, they have embarked on a short-term dash for money

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*Daniel Yergin is a research fellow at the Center for International Affairs at Harvard. His book "The Rise of the National Security State" will be published this year.

[1] The Organization of Petroleum Exporting Countries, founded in 1960, but not a significant force until 1970, includes Saudi Arabia, Kuwait, Libya, Qatar, United Arab Emirates, Iran, Algeria, Iraq, Ecuador, Venezuela, Indonesia and Nigeria, with Gabon as an associate member.

Source: *New York Times Magazine*, February 16, 1975.

and power. If 1981 were soon, we would not need to worry, but the crucial question before us is: Can we get into 1981 without collapse?

The price hikes have stimulated inflation in the major Western countries to unprecedented levels. Meanwhile, the pressures within OPEC continue to further increase the price of oil. Indeed, the oil producers have been playing a kind of "good cop, bad cop" game, which American leaders have apparently accepted. The Saudi Arabians are the good cops, claiming that they are trying to moderate in their own words, "the wild ones." Nevertheless, the price increases continued throughout 1974, and in December, it was Saudi Arabia that took the lead in pushing the latest price rise through OPEC. Now Iran is trying to nudge up the prices, the oil ministers of both Kuwait and Iraq declare that further price increases may well be necessary before September 1975, and the outgoing Secretary General of OPEC says prices should increase by at least another 25 percent. These prices may be even more important in promoting the growing recession. Western Governments' ability to engage in classical pump-priming to fight unemployment is limited by high-inflation rates. Meanwhile, the very high oil prices mean the withdrawal of vast amounts of income from the industrial countries that would otherwise be spent on goods and services or invested.

Even more serious at this time are the possible momentary consequences of sudden huge transfers of funds from the West to the OPEC countries.

Some of the OPEC nations cannot use their oil income at home—even if they pave their streets with gold and build all the hospitals and schools they will ever need, billions will be left over. To preserve the value of this surplus, they put it back into Western financial markets. This OPEC surplus income was $60 billion (out of a total of $110 billion) in 1974, and the total surplus could reach $300 billion by 1980. This massive amount of investable income—so-called petrodollars—moving under OPEC control from bank to bank, country to country, currency to currency, could play havoc with international banking, currency-exchange rates and world trade. It could result in major financial breakdowns. More immediate, even within this year, is the possibility of bankruptcy of individual countries like Italy and Britain, unable to pay for the quadrupled price of oil. Their failure would send shock waves into the economic structure of every other major industrial country.

Another major effect, which we are now only beginning to see, is the rapid growth of a "hostage constituency." This includes foreign countries that hope to win some respite from immediate payment problems by establishing "special relationship" (essentially that of clients) with the producers. This constituency also includes here at home oil companies, international banks, defense contractors, aircraft and heavy-equipment manufacturers, construction firms, salesmen of all kinds—for all of them the OPEC countries, especially in the Middle East, provide the only growing markets. And thus these businessmen develop a short-run stake in OPEC's accumulation, and may well tend to discount the problems associated with it. Iran's dispensation of $9 billion in grants and loans to foreign governments and companies in 1974 and early 1975 gives some idea of the magnitude of "good-

will" to be bought. The buildup of such a constituency could become a major drag on an independent American foreign policy.

The enormous foreign assets now accumulating in the oil-exporting states give them the capacity to purchase major interests in large numbers of Western firms, a process already begun. We may wonder if the OPEC investors will be interested simply in maximizing company profits, or if they will also seek to further foreign policy goals of their states. For instance, OPEC investors want to share in oil companies. It would certainly be in their economic interest to use such a position to discourage exploration and development of new supplies. If they can slow down North Sea oil development by 3 or 4 years, they can increase their income by many tens of billions of dollars. This is clearly on their mind. In a little noted statement, Mana Saced al-Otaiba, petroleum minister of the United Arab Emirates, explained that recent OPEC price hikes are partly aimed at cutting into oil company profits: "These profits are being used by them to find alternative sources for our oil. They are investing on a huge scale in the Arctic and the North Sea; our wealth is being squeezed and piled up profits are being used to do away with our oil. . . . this we will not accept."

The possible dire consequences of current high oil prices may of course never become reality. The world may take higher prices in stride, the consuming countries may find the problems of adjustment much overstated, and, in retrospect, we may laugh at the present crisis as nothing more than a jittery passing phase. In other words, we may well muddle through. Simple prudence, however, as well as the scale and gravity of the problems involved require that policies be considered that take into account pessimistic as well as optimistic assessments.

For the moment, the most urgent problem created by the cartel is the massive accumulation of petrodollars. The unrest it causes could be dealt with in an agreement between exporting and importing states, the so-called bankers' strategy; another approach would involve an agreement among the oil-importing industrial nations. In addition, there are alternatives that could destroy the cartel altogether; economic, political and military measures directed towards the cartel's control of the oil market, its internal unity and the security of its individual members.

THE BANKERS' STRATEGY

The easiest solution to the oil problem, or at least to its monetary aspects, is the recycling of petrodollars through the private banking system. This is now occurring. Many bankers, however, take a dubious view of the process. Petrodollars are deposited in Western banks that then loan them out to Western businesses or governments whose financial soundness is being progressively undermined by high oil prices. Thus the bankers are in the position of making loans to borrowers whose credit ratings are growing poorer and poorer. Bankers worry also that the concentration of the petrodollars in the European currency market in 20 or so of the largest banks, on very short term (often less than a week) and beyond the realm of governmental con-

trol threatens the stability of the entire banking system. For while the Arabs continue to prefer short-term deposits, the banks must continue to make long-term loans, leaving themselves open to the possibility of sudden insolvency. And there is no higher agency to insure the soundness of these banks in the way the Federal Reserve insures the soundness of domestic banks in the United States.

One or two failures of major banks would have devastating repercussions throughout the highly interconnected system. Some, therefore, look for recycling through government "safety-net" agencies set up to make loans to countries that find themselves in sudden need. This, however, is cumbersome, temporary and only partial. It would result in stronger countries like the United States making multibillion-dollar loans each year to weaker countries like Italy, with the likelihood of repayment decades in the future at best, and it would put the United States in the position of guaranteeing what are in effect bad loans by private banks. This whole effort to recycle seems to have a strong element of self-destruction in it.

Recognizing the inadequacy of such recycling mechanisms, some now see the solution in the form of an agreement between importing and exporting states, in which the latter would essentially give up their control over the disposition of their earnings in exchange for a guarantee of future returns. This would allow the West to recycle petrodollars to meet the balance-of-payment difficulties of particular states, and to spread the real transfer of resources to the exporting states over a long period of time. It would lessen the need for implementing politically difficult domestic conservation measures, and for considering more dangerous political and military options. The joint authors of a widely noted article in the January Foreign Affairs recognized the impossible strains on the current international monetary system and advocated a host of banking and investment schemes, many of them like supermutual funds, to retransfer perhaps $450 billion from the producers back into the industrial countries through the rest of this decade.

Such strategies assume an element of trust and mutual interest in general prosperity that might be found in a friendly bankers' club, but is not evident in the maelstrom of the world marketplace. These proposals really offer methods by which the petroleum powers would give up power in exchange for interest payments. There is no reason for them to do that voluntarily. In truth the obvious conflict of interest between consumers and producers is at least as great, if not greater, than any correspondence of interest. We should not expect the OPEC countries to be altruists and put the claims of the Western World before their own opportunities to improve the lot of their own peoples. And why should these kings, emirs, and colonels care much about the fate of Western democratic institutions since they do not think much of them and certainly do not practice them? Not long ago, the Shah of Iran dismissed democracy as "5-year-olds going on strike parading in the street." He added, "It's all yours, you can keep it, don't you see. Your wonderful democracy. You'll see in a few years what your democracy leads to."

But we should not go too far in personalizing OPEC. The liberty to dispense their earnings as they please has brought oil-exporting states direct economic power. It has increased their political and diplomatic prestige. It has brought self-esteem not only to those that are

rich but even to those Third World states that are economically harmed by higher oil prices. There have been no protests from other Third World states. It is a victory of the Third World against the First, of the South against the North. There are human drives at work in the oil situation that go far beyond the satisfaction of mere economic wants. It is not likely that the oil-exporting states will renounce that freedom and discretion over economic resources that has fulfilled so many of their aims.

THE INDUSTRIAL-NATIONS STRATEGY

It might not be necessary to make an agreement with the OPEC nations in order to deal with the monetary consequences of petrodollars, however. The oil-importing nations might simply agree among themselves to pass laws prohibiting the investment of petrodollars in anything but long-term bonds that they would issue individually or jointly. This would immediately solve several problems. Since the bonds could not be cashed before their term was up, the dangers of short-term deposits and other sudden shifts of money would be eliminated. Meanwhile, of course, Western businesses and governments would be free to utilize this huge supply of capital. And the dangers of direct OPEC investment in Western industries would no longer exist.

The engaging utility of this idea leads one to ask why such an agreement has not already been reached. For one thing, it would require truly serious commitment and cooperation on the part of virtually all major industrial nations, and especially on the part of the major depositories, the United States, West Germany, Great Britain and possibly Japan. These nations would have to trust each other and work together with absolute determination to prevent the possibility of laundered petrodollars entering their economies despite the laws. Such cooperation may be difficult to achieve because of European and Japanese distrust of the United States. While the oil crisis has hurt everyone it has hurt the United States least. Oil-company profits are mostly American oil-company profits. The direct economic consequences of high oil prices are less painful for the United States, and the relative strength of the American economy, as well as its size, make it an attractive place for oil exporters to put their money. The Europeans will be leery of any recycling facility that places decisions about the allocation of funds in American hands. It is not clear that such suspicions can be overcome, even by the most magnanimous institutional arrangements.

Furthermore, though the OPEC nations might decide to go along, they would not be without recourse if they decided to oppose such a financial diktat. They could, for example, respond by cutting back their production, preferring oil in the ground to money in a trust. But a sudden production cutback would dramatically worsen economic conditions in the industrial world, and the importing nations would be faced with an unhappy choice: Either back down or resort to harsher political or military measures against OPEC.

SHRINKING THE PIE

So far, we have considered strategies that deal only with the monetary and direct-investment consequences of the oil crisis. Other strategies could be undertaken to accelerate the decline in oil prices that is

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likely to occur in several years in any case. The first step would be a serious conservation program, coordinated with those of the other industrial nations. The battle between President Ford and the Congress over oil-import fees shows that conservation is not easy and, like all other responses, is painful. Nevertheless, the present deadlock in Washington is tragic. Conservation through gasoline rationing does have the appeal of being the quickest and most direct method of reducing consumption. The question of feasibility on a large scale was suggested during last year's oil embargo in Los Angeles, where, according to Harold Williams, dean of the Graduate School of Management at U.C.L.A. and the city's emergency energy coordinator, citizens consumed 25 percent less gasoline "without major inconvenience." Certainly, conservation will have costs, but they are manageable with fiscal tools, unlike the much greater and unmanageable costs of continued dependence upon OPEC. Conservation will reduce the outflow of income from the United States to the OPEC countries, a good in itself. It will demonstrate seriousness on the part of the United States, warning the producers that the United States will not readily adjust to OPEC prices and communicating an intensity of concern that other, more vulnerable industrialized countries have doubted.

But the most important consequence is one that directly affects OPEC's income. It might be called pie-shrinking. Demand (consumption in the West) is probably a more important determinant of the world oil market than supply. The other industrial nations have been considerably more effective than the United States—West Germany and Belgium, for instance, each reduced their petroleum consumption by about 10 percent in 1974. But, because of what the Brookings Institution study "Energy and U.S. Foreign Policy" calls "the uniquely energy-intensive character of American society," the United States, consuming about a third of the world's oil production each day, is by far the most important element on the demand side. And serious conservation would have serious effects.

OPEC countries today have an output capacity of more than 37 million barrels a day; they are now producing about 29 million barrels a day. Oil is still in oversupply, and some OPEC countries are now independently offering "discounts" in the form of better credit terms. Tough conservation measures in the United States could, as Senator Frank Church has suggested, reduce imports by 2.5 million barrels a day, and other industrialized countries could cut back by another 2.5 million barrels. That would bring OPEC down to perhaps 24 million barrels a day. Meanwhile, oil production would be increasing outside the OPEC net—especially if, as Secretary Kissinger has proposed, prices in the West can bet set at levels guaranteeing a good return to non-OPEC producers over the long term—and coal and other sources of energy would be supplanting oil. Many forget the wonderful stimulus that economic gain can provide. For instance, in 1967–68, within 1 year, Occidental Petroleum made one of the biggest strikes ever in Africa, built pumping facilities deep in the desert, as well as a pipeline and a seaport, and was delivering oil into tankers 130 miles away.

OPEC is not a monolith that can adjust automatically to changes in demand. Adjustment is a product of political bargaining within

the cartel, which is composed of 13 very different nations with different problems and outlooks. To be specific, we can distinguish between the "savers," nations with small populations and large reserves (for example, Saudi Arabia, Kuwait, Libya, the smaller Persian Gulf states) and the "spenders," nations with relatively large populations more advanced and more expensive development programs, as well as military commitments and runaway inflation (for example, Nigeria, Iran, Venezuela and Indonesia). The "savers" can adjust to shifting demand with relative ease. The "spenders" cannot.

Let us take the current example of one OPEC member, Ecuador. In the first half of 1974, its production averaged 220,000 barrels a day. Today, it is less than 100,000 barrels a day, because demand has considerably slackened for Ecuadorian oil. Meanwhile, Ecuadorian expectations and commitments have risen sharply; the ruling military junta has embarked on an expensive development program and armament binge. Moreover, inflation is running around 30 percent a year. Thus, Ecuador is in a bind if it cannot continue to sell considerable amounts of oil. It is as though Ecuador, carried away with its sudden increase in income, had sold its Volkswagen and bought a Cadillac on the installment plan. While it could certainly meet payments on even a fancy Buick, it cannot meet the payments on the Cadillac unless its income goes up again. The internal political dangers for the regime are clear in this situation. Now, in these circumstances, one of the savers might decide to subsidize Ecuador in order to maintain a united front. But what happens if patterns of consumption shift sufficiently to cut exports of all the spenders? The "savers" cannot subsidize all of them, and the cut in consumption cuts into the "spenders" income in a way that is felt—enough to threaten the "spenders" plans and dreams and perhaps even the survival of their regimes.

We can further accentuate the problems of the "spenders," the weaker economic links in the OPEC chain. First, we can adopt the suggestion of economist M. A. Adelman of M.I.T. and import oil into the country only under sealed bid (perhaps through a Government agency) so the members of the cartel will not know the real price at which their fellow cartelists are trying to sell oil in the United States. That will promote distrust, cheating and thus the weakening of OPEC. We can also shift sources around to promote pressure. We import between 6 and 7 million barrels of oil a day. One-and-a-half million of those barrels come from Venezuela, which has a large population and an expensive development program. Our imports from Venezuela are half of that country's entire exports. If we simply stopped buying their oil, they would face grave difficulties.

It is unfortunate, but the countries that can most use the oil income are the ones that are, for that same reason, the most vulnerable. Moreover, other OPEC countries themselves want to increase production now. For instance, Iraq plans nearly to double its output in the next 2 years, as it can use all the oil income it can get. For it to sell its oil, other OPEC countries—including its bitter rivals Iran and Saudi Arabia—would have to cut back production.

What would happen?

Perhaps some of the "savers"—Saudi Arabia, Kuwait—would cut back production to help their fellow cartelists. Perhaps. But there are

limits to how far they can go in cutting back production, because the pie is now getting smaller, not larger, and some countries are being called upon to make sacrifices, to surrender gains. It must be remembered that the OPEC countries are engaged in a short-term dash for income; their greatest profits will be made in the next couple of years. By cutting back production, they are accepting a smaller income now, with no assurance that they will be able to make it up later.

Rather than depending upon unilateral production cuts, the producing countries might try to respond with OPEC-orchestrated, OPEC-wide production cuts. Perez Alfonzo, the Venezuelan official credited with conceiving the idea of OPEC, observed in 1970 that he considered the backbone of OPEC to be the centralized regulation of production and exports directed toward stabilizing prices at a desirable level. That backbone still does not exist. The OPEC countries have succeeded in agreeing on price, but not on production. They came to a high-price agreement in 1973 at a time when circumstances had strengthened their hand. Demand had been growing in the world at a rapid rate, and the United States had become increasingly dependent upon Middle Eastern oil. Meanwhile, there was an absence of the unused or underused production facilities that had existed in the 1950's and into the 1960's.

The circumstances that favored OPEC unity are changing. Demand is stagnant, discoveries continue at a rapid rate, and production outside OPEC will soon be increasing markedly. There is a limit to how many nations can crowd into the OPEC tent without creating a brawl inside. Production cutbacks are more difficult to orchestrate than price hikes. The OPEC nations have in effect agreed to submerge differences in order to increase general gains. But cutbacks mean apportioning losses, and that accentuates rivalries. Until recently, the strains were obvious. In 1969, after OPEC passed a resolution against granting new concessions to such countries as Japan, Abu Dhabi and Qatar granted concessions to the Japanese because they wanted to increase their own revenues. In 1972, Libya actually threatened to quit OPEC. Cutting back could revive the rivalries; it would certainly test OPEC in a way it has not been tested before.

POLITICAL AND MILITARY ACTION

Still, pie shrinking alone may not be speedy enough to solve the short-term problem. The dangers of monetary collapse and national bankruptcy could be upon us soon. The OPEC states will not relinquish their control over their funds out of a sense of generosity toward industrial democracies or even a notion of shared economic interest. The West's prosperity depends more on oil than the oil-exporting states' prosperity depends upon the economic health of the advanced states. Even in a depression, Libya, Kuwait, Abu Dhabi and Saudi Arabia would probably have more wealth than they could spend. A serious economic crisis might well leave the oil-exporting states relatively, if not absolutely, better off than they are today. To induce the members of OPEC to give up some control over their foreign exchange earnings, and to lower oil prices, it may be necessary to use the threat of political and military action.

The first step for the United States would be intellectual, a crucial reformulation of our interests. Since World War II, a dominant thrust of American foreign policy has been to prevent the oil-producing regions of the Middle East from falling under the sway of a hostile power, the Soviet Union. Indeed, the first fully postwar dispute between the United States and the Soviet Union occurred in early 1946 over the territorial integrity of Iran.

Americans might now conclude that the Middle East is already under the control of a hostile power, OPEC, a non-ideological adversary, but an adversary just the same, waging a limited war against our own and the world economy.

Conflicts among oil-exporting states and within them open points of political leverage for the consuming states. OPEC is a political construction, in which the members have agreed to submerge differences in order to maximize gains. But the conflicts continue to exist, especially in the Persian Gulf region, symbolized and made more acute by a multibillion-dollar arms race. Saudi Arabia and Iran both desire preeminence in OPEC and in the Persian Gulf region. Iraq contests its border with Kuwait. Iran supports the Kurdish rebels in Iraq, and shoots down two Iraqi jets. The Saudi Arabian Defense Minister announces that a "Moslem and brotherly state"—revolutionary Iraq—poses grave dangers in the Persian Gulf. Iraq embarks on a rapid program of expansion that could in 5 years push it ahead of Iran in production, an intolerable threat to the Shah's visions of greatness in the Persian Gulf. The West might choose under these circumstances to accentuate the conflicts by shifting support, playing upon the fears and jealousies and contributing to those fears and jealousies whenever and wherever it can.

Some might suggest that the solution of the OPEC crisis could be linked to an Arab-Israeli settlement; in other words, the West pressures Israel in the hope of obtaining lower oil prices for itself. It might work. Israel should certainly, for its own good reasons, forsake rigidity and move toward an accommodation with the Palestinian people and withdrawal from the occupied territories. But there are many reasons to think that even a successful Arab-Israeli settlement would not lead to lower prices. Most of the OPEC countries that need the higher revenues for their own development programs are not Arab and have little concern with Israel. Saudi Arabia's King Faisal does wish to regain Arab control over Jerusalem, but he also enjoys his much increased income and power, and he would face great pressure from other producers and from within his own society if he unilaterally tried to lower prices to reward the industrial world for a setlement. Moreover, trying to link these two problems might only end up making two already complicated problems even more complicated.

In considering political approaches, the United States and the West should remember that the conservative regimes around the Persian Gulf have more at stake in our support at this point than we do in their continued existence. They are fragile to begin with, and face many pressures in adapting to modernity and their new wealth. They survived in the postwar era to a significant degree because Britain, and even more so the United States, guaranteed and underwrote their survival. Saudi Arabia is only now completing its first census, and

its population could be less than 5 million people. Its development plans—with a $70-billion shopping list in the next 5 years—call for large movements of labor from other Mosleum countries. The new workers may well come tinged with radical ideas that threaten Faisal's regime. More than half of the million people in Kuwait are already foreigners. The Shah of Iran only regained his Peacock Throne in 1953 in the course of a CIA-sponsored coup. There are at least 20,000 political prisoners in the country, and an anti-Shah movement exists among overseas Iranians. In all these countries, new wealth is creating new upper and middle classes, as well as working classes, that will seek their share of power. The great wealth itself makes the coups all the more tempting. For the present, however, the conservative rulers around the Persian Gulf have chosen to forget that their only effective guarantee against external and internal enemies is the West, particularly the United States. If these guarantees should be weakened, if the consuming countries led by the United States indicate that the price of oil is a more vital interest than the preservation of monarchies, then the renewed recognition of their political vulnerability may give these rulers significant pause.

If the oil situation worsens, and if the West wants to send a stronger signal, it could begin to withdraw the support it provides for the military infrastructures of many of these countries—as an even more forceful reminder that dependence is mutual. The extent of the producers' dependence is extraordinary. In 1974, the Shah purchased $5-billion worth of military equipment from the United States. Yet this dependence goes beyond equipment, spare parts and training—thousands of American technicians, working for U.S. defense contractors, are now stationed in Iran in order to service the Iranian Air Force. The abrupt termination of Western military support, or the imminent threat of it, might cause anxious military leaders in these countries to decide that security and a reasonable price for oil are far more valuable than the continued presence on the throne of a particular ruler who has alienated important allies. On the other hand, we might limit our break to one country—Saudi Arabia—and leave it to contemplate its weakness.

There is one final alternative that could break the cartel, and that is the ultimate sanction of military invasion. No one wants to see such intervention, certainly not the men who lead OPEC and surely no responsible leader in the West. Such intervention would introduce even more instability into uncertain world politics. But it could come about if the consuming nations begin to see in OPEC a threat to basic national interests—to the viability of the world economy, their own economies and democratic political institutions. Events have progressed to the point that this course of action, unthinkable 6 months ago, is now seriously debated. But one can only visualize military intervention in one of the following circumstances:

(1) Another Arab-Israeli war accompanied by OPEC embargoes that threaten to choke the industrial world.

(2) Further substantial cutbacks in oil production or further sharp increases in price in all effort to thwart Western conservation and development schemes or, simply, to satisfy OPEC's enlarged appetite for new income.

(3) A rise in the economic costs of current prices—measured in inflation, depression, bankruptcy and monetary collapse—to the point that they threaten the continued existence of democratic regimes in the industrial world.

This is what West German Chancellor Helmut Schmidt meant last year when he warned that "the irrational use of force might ensue," when high prices threatened "economic stability" and industrial nations are confronted "with intolerable adaptation and reorganization problems incapable of being solved at short notice and are thus driven into employment crises or toward an even higher rate of inflation."

But after the Vietnam experience, it would also be necessary for the U.S. public to accept the idea that a slowmotion "strangulation" was in progress, that the OPEC policies were the major source of mounting economic difficulties and that fundamental issues were at stake. Similar opinion would have to be widespread in the other industrial countries, ensuring acquiescence, if not outright participation, by the Western Europeans and the Japanese. A Franco-American détente would also be important. Finally, the other measures we have already suggested, all of which involve much lower costs, must have been tried and found inadequate. We will probably know this year if the "highest cost" option is likely. Much depends upon what OPEC chooses to do.

The only logical target for intervention is one from which massive amounts of oil can be quickly and cheaply pumped. That excludes Libya, which is logistically easier because it is on the Mediterranean, but which lacks sufficient reserves. A more realistic place for intervention would be the strip along the western shore of the Persian Gulf some 400 miles long and 100 miles deep that accounts for 40 percent of OPEC's production and about 60 percent of its reserves. Within that area, Saudi Arabia, in effect a desert island afloat on a seemingly endless sea of oil, presents the most likely target.

The military problems themselves seem manageable (though less so than many suppose) since it is only necessary to occupy a small segment of desert territory, not "pacify" a country. Some planners believe that three divisions, roughly 45,000 troops, backed up by naval and air units would be sufficient to seize perhaps two fields in Saudi Arabia, including the mammoth Ghawar field. Resistence would probably not be great, as Saudi Arabia's army is composed of 40,000 men, dispersed around the country. It is difficult to imagine that the Saudis would actually risk covering their installations with explosives on a day-to-day basis, as the chance of serious accident or sabotage by radical workers would be so great. Oil experts estimate that, even in circumstances of the most severe sabotage, it would take a maximum of 3 months to have the fields back to high production levels—and the West has stocks and oil in shipment that could last considerably more than 3 months. It is, furthermore, hard to imagine guerrillas acting effectively in these isolated deserts, where they can be easily detected by aircraft and where the area being protected is so small. The other OPEC countries would undoubtedly curtail production, but with production so easy in Saudi Arabia, this response would mainly injure the other OPEC countries. (There is the question of what Iran would do, but the Iranian Air Force is still dependent upon Americans for the

next few years, and in any case, Iran would hardly want to go to war against the Americans, for that would leave its 1,500-mile Russian flank vulnerable. Thus Iran might find itself immobilized).

One must keep in mind, of course, that the failure of an attempt at intervention would be a disaster—Suez, 1956, multiplied by 100. And even if it were successful, an intervention would destroy the U.S. position among the Arab countries. The United States would also have to bear the burden of running, manning and supplying the oil fields at high production for 2 or 3 years, until the other members of OPEC agree to a negotiated settlement and until there is enough spare capacity in the world to assure that OPEC could not regain its ability to choke off oil to the West.

The most important question, however, involves the reaction of the Soviet Union. An American intervention would probably weaken détente between the two super-powers at least for a year or two. Moreover, the Soviet Union could take countermeasures, including mining the Strait of Hormuz, the most vulnerable point in the Persian Gulf. The channel used by deep berth oil tankers is only 2 nautical miles wide. Yet, while détente might be strained, the West might well be able to count on Soviet neutrality (at least with the current Kremlin leadership) so long as the intervention occurred in Saudi Arabia, a conservative, strongly anti-Communist state, and did not interfere with a leftist regime, such as that in Iraq, which has a treaty of friendship with the Soviet Union. Furthermore, the Soviet Union needs a viable industrialized West for its own development purposes. Soviet leaders well know the huge costs that Russia had to bear for the last world collapse, first in the disruption of its first Five Year Plan and the purges that came with isolation in the nineteen-thirties, and then, even more so, in the form of World War II. The Soviet Union cannot be happy with the prospect of the development of a powerful independent Moslem bloc to its south, composed of states that might even possess nuclear weapons. Further, new Moslem centers, particularly if working together, would have major disturbing effects on the Moslem minorities in the Soviet Union. Faced, then, with a West moving to protect an interest that the Russians recognize as vital to the West, they might well be content to increase commitments to Iraq, reap a great propaganda victory in the third world and bask in a new prestige throughout the Arab countries.

Will there be intervention? Not if somehow the West muddles through, bailing one or two nations out of bankruptcy, keeping loose money under control, imposing some controls on direct foreign investment. Not if some genuine agreement is reached among consuming states that would avoid the potential monetary crisis. Not if the exporting states, showing sudden moderation, move towards a negotiated lower, but still just, price that actually assures them a longer-term income from their oil. Not if the Western world really succeeds in shrinking the OPEC pie. The United States, as a consumer of one-third of all the oil produced every day in the world, is by far the most important of potential conservationists. So far, we have failed badly in our conservation effort. That effort should begin immediately on a massive scale. The short-run costs and discomforts of readjustment are much less than the potential high costs of military intervention.

But we must also keep in mind that none of these developments may materialize or succeed, that the economic crisis of the major states could continue to worsen, and that the political strains could mount. We will know, surely within a year, how things are likely to turn out. If there is no improvement, then military action may come to be seen as the only means to prevent further political and economic transformation that would leave the world a far different place from what it is today.

We are certainly on the threshold of a new, unfamiliar era. For better or worse, relative stability in international politics since World War II has been based to a considerable degree upon the strength of the American economy linked to those of Europe and Japan. That basic element may be passing away faster than we realize. But it is unlikely that the citizens of the West would allow it to slip like sand completely through their hands in the course of a couple of years.

American Import Policy and the World Oil Market

(By M. A. Adelman)

THE AMERICAN MULTINATIONAL OIL COMPANIES

Laying aside American interest, it would be a misfortune to the world economy to oust American (and British and French) companies from oil production in the OPEC countries. They contain the great bulk of the know-how. In oil finding and development, governments have done rather poorly. Therefore to avert a real, not phony, shortage, it is in the interest of the non-Communist world, and not only the United States, that these companies stay where they are. The problem is that the companies are today the cutting edge of the cartel of the OPEC nations.

OIL COMPANIES AS TAX COLLECTORS ESSENTIAL TO A CARTEL

A cartel exists to keep the price well above the competitive level. Each member is perpetually tempted to expand output because the profit on the incremental sale will be very large. If everyone does this, output expands, prices fall, and the cartel disappears. If some do this, taking business away from others who then retaliate, the price erodes and the cartel crumbles gradually. A seller must not act independently. He must keep the faith and have faith that everyone else refrains from selling incremental barrels at better prices.

There are two ways of holding the cartel together. Either output is limited and allocated to each seller, letting the price find its own high level, or else the price is fixed and all transactions must be monitored to detect any price reductions.

The OPEC nations use the second method. Their taxes are income taxes only in form, excise taxes in fact, in cents per barrel. In effect, the tax is price charged by the government. Taxes are fixed by each nation in the knowledge that the others are charging about the same. If one charges more, the others are quick to match it. Only within narrow limits can one manoeuvre for higher output, because taxes are a public record. The companies' margin above tax, to cover costs and profits, can be left free to fluctuate.

The oil companies, as the tax collectors who market the oil, are indispensable to the cartel. For if the host nations could not fix, in concert, a few taxes to a few companies, easily compared and checked, they would have to agree on and then monitor, hundreds of complex deals all over the world. If they went downstream into the sale of refined products, their problems would be multiplied.

Cartels usually fall apart. Their members understand perfectly well the strength that lies in union. Nobody who knows the first things

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Source: *Energy Policy*, vol. 1, September 1973.

about competition will call the failed cartelists ignorant or stupid. But the history of world oil shows the difficulties.

—Even a small tightly knit private cartel eroded in the 1930's.

—OPEC attempted and failed to restrict and allocate output—in 1965, 1966, and 1968—despite their recognition in 1960 that it was in their interest to do so.

—On several occasions OPEC governments shaded taxes to obtain incremental output and revenue.

—Shiek Yamani, Saudi Arabian oil minister, worked for years to obtain participation to head off nationalisation, which he truly and repeatedly warned, would be a disaster because it would remove the companies as a buffer, lead to competition and undermine world prices. More recently, having achieved participation, he has stated that if there was nationalisation the governments would form a cartel (which they already have) to raise prices even higher than with participation. If so, then for years he has laboured to avoid higher prices and higher revenues for his government. This is not even slightly credible.

—After Iraq seized Kirkuk fields in June 1972, and threatened to sell at reduced and competitive prices, OPEC members formally pledged to avoid replacing Iraq production. But they proceeded to do so, by a record output expansion at the Persian Gulf.

—There has been a doubt about face in Iran, which is particularly keen to expand output because the penalty or opportunity cost of waiting for receipts is probably no less than 20% per year. Hence Iran faces a very difficult choice or trade off. They do not wish to undermine prices or weaken the cartel of which they were one of the principal architects. Yet a dollar received 5 years hence is worth only 40 cents today, while a dollar received 10 years hence is worth only 16 cents. Hence a rapid expansion of output may be their best bet even if it risks a collapse of the cartel. This is no complete and sufficient explanation for Iranion policy. It only proves that even the strictly economic interests of the cartel members may be pretty far apart.

How to remove companies as tax collectors is not now on any agenda. (Although, aside from special authorizations, American and European company subservience to a collusive price agreement among governments seems clearly in violation of U.S. and EEC anti-monopoly laws.) But it is entirely practical.

The companies could remain as contractors for exploration, development and production, paid by the governments in money, or a share of oil, et cetera. The current regime in Indonesia shows that this is a practical solution with which both parties can live.

The United States will not and also should not make any such move at present. The other large consuming countries, particularly France, Germany, Italy, Japan, and perhaps even Great Britain, would do their utmost to have their own companies succeed the Americans as tax collectors. Frightened as many are by the Washington scare talk about a worldwide energy crisis, it may take them years to calm down. They are under the delusion that having their own companies in place somehow gives them access to the oil, which Anglo-American companies would deny them. The old Gaullist delusion is mighty yet, in

defiance of logic and experience. The special French relation with Algeria, where high oil prices were to be offset by export rights, and security of supply, brought only a decade of increasing burdens and final expulsion from the secure oil. Yet a special relation is what the Europeans are now seeking, gripped by the same delusion of getting past les Anglo-Saxons. But where Europeans drew back from paying $200 million for a scrap of paper conferring a share of Abu Dhabi offshore, Japanese grasped it at $800 million! The fever must run its course, and the dear lessons of experience will not be learned except at first hand and the second (or third?) time around.

Hence using the tax law or antitrust law or any other device to force American companies into the status of contractor would only lose valuable time. American companies would be succeeded by European or Asian, who would only learn by some painful experiences, slowly. Hence the suggestions for a counter-organization of consuming countries are beside the point. None of them is addressed to the relevant question: How to get the cartel off our backs?

But the United States could cease to terrorize its friends. Fears of Europe and Japan that Middle Eastern oil they were counting on to cover their needs will be diverted by the United States for its own use in a few years weren't dispersed by the recent explanation of a top U.S. official to the [OECD] nations . . . If anything, they're now even more worried because the United States clearly warned them that nothing will stop it from importing the oil it needs. Another recent example is discussed below. The U.S. Government has practiced this intimidation in public and private. When it stops, it will be time to begin discussing cooperation.

THE OIL INDUSTRY TODAY IS DIFFERENT

A number of arguments are now offered to the effect that even real nationalization, the producing nations or direct sellers, will not help—the rise in prices is inevitable, and we should not try to resist it. If this is believed, it is a self-fulfilling prophecy. Any special explanation had better be a good one. We will examine three.

Production will be restricted because oil in ground appreciates faster than money in bank

In developing a given reserve, a barrel sold today is a barrel less for sale tomorrow. Hence its future value (return above cost), discounted to the present, is part of the cost today. If the value rises at an annual rate higher than the discount rate, it is worth waiting before starting production.

But the principle governs only when the price is an outside fact, not determined by the operators. Under a cartel system, even if the future value of the barrel were zero, and it was a case of sell it now or never, the cartelist would not produce it. For if everyone did so, it would wreck prices. This kind of selfrestraint has been in force for decades. Hence to suggest that Persian Gulf production may be restricted in the future is to be 50 years out of date. The price decline of 1957–70 was only a minor relaxation, as control of supply diminished, before the dramatic reversal since then.

Under noncompetition, the comparison of oil price changes with

interest rates is simply irrelevant. If the price were jacked up to the ultimate ceiling tomorrow, and held there, the rate of increase of interest rates would be zero, but it would still be the most profitable level.

Even where the operator takes the price as an external fact, the comparison of present and future prices must have a specific time frame. For example, take 7 percent as a safe interest rate and assume the price will increase at that rate, doubling in 10 years. If costs remain constant, the net value of a barrel 10 years hence, discounted to the present, is a bit higher than its value today. But it does not follow that the price will again double in 1982–92, be eight times as high in 2000, and so on. There is a prohibitive risk in trying to forecast prices that far ahead. It follows that the government of Kuwait, in restricting annual output to about 1 percent of reserves, hence holding back over half their current 66-year stock for after 2000, is making a mistake. They may have other, sound, reasons.

Producing countries will have nothing to do with their money and won't expand production

This is obviously not true of Iran, Venezuela, Nigeria, Algeria, Iraq, and Indonesia. But let us assume that half of projected 1980 OPEC revenues are not spent for current consumption, real investment, or armaments. Gross domestic capital formation in the industrialized countries in 1980 should be around $800,000 million a year. Investment outlets are the last thing we need worry about.

It is true that Kuwait has decided to limit its production to 3 MBD or about 15 BD per citizen (excluding resident aliens). At this rate, Saudi Arabia should aim at 75 MBD to 105 MBD, or over 10 times current output. Yet it could be argued that countries like Saudi Arabia simply cannot obtain the personnel to manage a huge investment portfolio, may not be able to invest at short term, and will therefore be almost compelled to limit output to escape drowning an unmanageable wealth. This argument is *not* a logical error like oil in ground—money in bank discussed above. The alleged fact may be left to the conjecture of those better informed than myself, but the logic is only a special case of a well known economic theorem, the background bending supply curve.

There is an important implication. If prices were reduced, and revenues with them, additional money would become more desirable. Thus a price cut is twice blessed. Or, as was said earlier, the greater the revenues, the greater the nations' power to extort even more revenues.

Only Saudi Arabia will have any potential spare producing capacity in 1980, and by giving up market share if necessary, they can limit production

At $5 per barrel, it seems very unlikely that only one or two countries will have potential for profitable expansion. But let us assume it. There is an unstated major premise—that every producing country has its outlets assured by long-term contracts with the consumers. But some consuming countries may grasp the element of truth in this argument. It is to their interest to stop long-term contracts, and make the sellers compete frequently. Then all of the output becomes marginal

output, on which the seller is subject to pressure to shade prices in order to maintain sales. Hence a practical suggestion which can be put into effect at any time, though periods of actual surplus capacity are most favorable.

IMPORT QUOTAS AS A MEANS TO LOWER PRICES

Import quotas can be put up for competitive sealed bids, like any other valuable license. Packages of quotas could be available for periods up to 3 years, and should be freely traded. Any producer government with its own oil would be certain of a home for that oil—they need only bid high enough. Or a government could make a special deal with its company to lower tax per barrel on incremental output. This kind of collusion is beneficial.

No country would be left secure in its sales and revenues. Company affiliations would not matter. Even an integrated producer-refiner would need to obtain tickets as often as anyone else. The more transactions, the more chances for newcomers and interlopers to make incremental sales, the more opportunity for misunderstandings and betrayal and fear of betrayal by the members of the cartel.

OPEC governments doubtless would try to agree not to underbid. But this would be difficult to supervise and enforce. For example, when a company bought too many import tickets, they would claim it was at their own expense, without their host government's help.

The American market is very large, profitable, and expanding. Refusal to bid would hand it over to a minority of OPEC and some non-OPEC producers, who could have it all very cheaply. It would be very easy for a government to announce a boycott, while selling its oil through third parties who would bid for it. Governments already counting on receipts from large sales to the United States of America would find it necessary to find outlets for several million barrels daily.

The body administering oil imports could be charged to exclude from bidding for a longer or shorter period any parties, including governments, whom it found, after a hearing, to be in collusion. The economic penalty for collusion might be an effective deterrent to some. In addition, any companies, foreign or domestic, private or governmentally owned, are subject to the antimonopoly laws, for example, article 85 of the Treaty of Rome, or section 1 of the Sherman Anti-Trust Act. But the chief sanction would be the hope of gain and the fear of being left out.

There is a definite cost to this constant recontracting and trading in quota tickets. But it is tiny compared with the huge price increases which the cartel has in store, on top of those already imposed.

Consideration ought to be given to preference (for example, rebates) for more secure sources of oil. Indonesia refused to sign the embargo threat in February 1971 and has proved itself to be a more secure source. Nigeria was not yet a member of OPEC, and we ought to presume them innocent until proved guilty of waging economic warfare. The most insecure oil is obviously from Libya and Saudi Arabia. Planning should also begin to raise internal excise taxes on oil products as high as possible. It is a foregone conclusion that oil prices will be raised to the point of maximum return, where further increases

would lose so much sales as to be counterproductive. The more the consuming country preempts in taxes, the less is left for the cartel, the smaller its revenue, and the less its power. The higher excise tax revenues are then clear gain to the whole consuming country. The attacks by the OPEC nations on the internal taxes are hinting at a truth the consuming countries may learn in the next 10 years.

SOME INJURIOUS SUGGESTIONS FOR PREFERENCE

It is instructive to ponder some types of preference seriously considered in the United States of America today. In September, Saudi Arabia suggested that their exports to the United States be free of quota, in return for which they would make substantial investments in the United States. Kuwait has made a similar proposal to the EEC. Such a deal would damage the importer. "Assurance" of supply is not to be taken seriously. Discretion and control of imports would be lost. Aside from the need to repatriate interest and dividends: at any time the owners could either sell out, or borrow huge amounts on the security of their investments, and sell the importing country's currency. At best the importer would be living on capital, giving permanent assets in exchange for current consumption.

The State Department must have known that no such agreement would be possible under the U.S. law, but that the more suspicion that it was possible would alarm Europeans and Asians. They were reported to be "enthusiastic" over the proposal, and gave it much publicity.

CONCLUSION

The effect of American policy has been and remains to strengthen the cartel. The force of inertia is such that no quick change is to be expected. Hence it is safe to count on rising world prices and growing insecurity in the next few years, perhaps for the rest of the decade. But since the policy rests on illusion, and is harmful to American interests, it may change. One needs to watch American policy rather than growth of American imports.

Changing Monopolies and European Oil Supplies

THE SHIFTING BALANCE OF ECONOMIC AND POLITICAL POWER IN THE WORLD OIL MARKET

(By M. A. Adelman and Soren Friis)

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In the circumstances, it is hard and probably impossible to avoid over-capacity. Yet to suppose that the cartel will break up because of excess capacity is like predicting that Holland will be flooded because the level of the North Sea waters is higher than much of the land. It depends also on the counterforce: The strength of the Dutch dikes, or the strength of the cartel. If the OPEC nations hold together, and if the consuming countries do nothing to exploit their chance to weaken the cartel, then it will hold. We do not predict which of the opposing forces will be stronger, at least in the short run, only that the forces will be strong and the cartel vulnerable. Earlier we explained why we expected the mutual confidence of the cartel members to hold in the near future. Supply will remain very insecure because of excess demand. The easiest, often the only way to clean out inventories and get the price back up is to have a sudden stoppage or drastic cutback, like the one of last October. Then the reason was the Arab-Israel tension; next time it will be something else. There will always be excellent, convincing reasons for the OPEC countries to do what is in their interest.

It would be best for the OPEC governments to continue to transfer the great bulk of the crude oil to the companies, who can quickly signal the cutbacks of output in response to lower demand, to prevent downward pressures on prices. The emergence of a large open crude oil market would be unfavorable to the cartel. The oil market is very complex. Because of the many supply points, the many consumption points, the complex of transport costs, and the many different kinds of crude oil (and products) it is impossible to create a fixed price system satisfactory to all sellers. Any given system of location and quality differentials will favor some and not others. Hence even a mild decline of tanker rates brought about by a Suez reopening or by a decline in ship prices, will be unsettling to the cartel.

Also, if producing governments build large refineries, and they operate oil tankers, they can shade prices in particular places without affecting the prices they get for the rest of the oil. Once a refinery is built, no one wants it to run at less than optimum capacity, and just as the integrated companies were once the most formidable competitors because they had cheap crude oil while independent refiners did not, so too the governments as integrated producer-refiners will have the most leeway or will find it easiest to start reducing prices.

Source: *Energy Policy*, December 1974.

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The large producing nations are not particularly friendly to each other, and there will probably be actual shooting wars as well as economic wars because possession of much desert or sea water will be so valuable, and many of the producing areas will have great wealth and few men to defend it. It would strengthen the cartel if the largest producing nations were to seize and occupy some of the smaller sheikdoms.

All in all we would expect the monopoly to be quite cohesive and firm at least for some years, but subject to strong and increasing dissensions. But beyond 5 years, so many new elements enter the situation that one has less and less confidence in any forecast.

A consuming nation or a large block like the Common Market could greatly moderate the impact of the high cartel prices by taking steps to exploit surplus capacity where it exists or help bring it into existence where it does not. For example, a nation might reap the benefits of an importing monopoly without the burdens, simply by putting all oil imports under quota, and requiring sealed competitive bids for quota tickets. Then anybody who would sell oil even a little more cheaply than the established importers would have to meet his offers or lose their market. This would not lower consumer prices, but in effect it would give the consuming government some portion of the enormous profits now being gathered by the producing governments. By permitting anybody who wishes to bid on the tickets, but requiring that he deposit the payment beforehand (and paying him interest on cash left on deposit) one would assure not only the maximum of competition, but would facilitate the use of 'front men' by governments who wanted more business without their rivals knowing it. Then, without reducing prices openly or generally, a cheap price on a small increment of production could be offered. To ensure flexibility, one would offer assortments of tickets: for a single month, a quarter, year, or several years, and also permit the resale of tickets.

The aim of such a system would be to capture for the Government some part of the very large difference between the cost of oil to the Government and the price. A large country like the United States could actually induce more rivalry, and mistrust, among the principal producing countries, since they could never be sure that others were not taking advantage by expanding their market share. In fact, the growth of large terminals and transshipment centers would make it difficult to trace the origin even of any particular shipment.

Thus the crude oil price could be driven down very far from its present levels. But it is no longer possible to allow the volume of imports to be governed by comparative costs. The reference prices used in Europe and other importing areas must in prudence be high enough to support a large enough volume of indigenous or friendly sources, to reduce European insecurity. In short, there must be a divorce between the world market prices and domestic energy prices. At present, the OPEC countries take the huge difference, but there is every reason of both economic and political interest, for the importing countries to take the margin, and they can do it, by inducing and exploiting the surplus. To be very specific, the lower the world crude price, the cheaper and easier it is to build up large security stocks.

We do not believe that any such expedient will be taken soon. The

consuming countries appear shocked and confused by the events of the past year, and are desperately anxious not to say or do anything which will offend any of the producing nations. But as matters settle down, and nations find the hardship of large deficits on oil account increasingly irksome, some may be ready to consider it. Actually, the idea is not original, because it was used on a much smaller scale in the 1950's by Japan, which for a time enjoyed relatively low prices of crude oil and products. The Japanese plan allocated foreign exchange inversely to the price paid for the oil. This led to price reductions on oil bound for Japan, which in turn spread to other countries in that part of the world, most notably Australia, where the process was revealed in a court case. It probably spread to other countries elsewhere as well, but as usual these facts are not in the public domain.

For the electric power industry, the principal need is for maximum flexibility. Like all good things, this costs money. A power company which is able to burn both coal and oil needs to invest more than one which is confined to only one fuel. Similarly, we would suggest that serious consideration be given to two other means of greater flexibility. First, establishing much larger storage capacity, possibly in places somewhat removed from the point of use, and taking advantage of new developments which permit the shipment of heated fuel oil in insulated pipelines. Second, the investment necessary to allow the power station to burn crude oil directly. This is now being done on a large scale in Japan; indeed, if the power companies there were permitted to buy the fuel they wanted, they would burn largely crude oil. Experiments should be encouraged and subsidized by Government.

The purpose of this kind of flexibility is to enable the power company to buy anything which will burn. Then, any government which happens to have some excess of any type of oil temporarily in excess knows that it can find a dumping ground or a "home" for that oil no matter of what type. Rather than risk weakening the markets in crude oil or gasoline, or home heating oil, et cetera, it would prefer to sell the oil quietly in a separate market, that is, to a power company. The power companies could take advantage of these passing circumstances, by always being ready to take oil off anybody's hands. We expect that there will be more such situations than in the past, because in addition to the old international oil companies, there will also be new companies and governments from both the new and the old areas. Their constant jostling and occasional disagreements will not, in our opinion, break down the cartel unless some consuming country governments make a serious attempt to help nature. But buyers can still take advantage of whatever competition exists to reduce the cost of their fuel by some appreciable amount.

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Oil Import Quota Auctions

(By M. A. Adelman)

FOLLOW THIS SCENARIO, AND THE CHANCES ARE THAT THE POWER OF THE OIL CARTEL WILL BE CHECKED AND THE PRICE OF IMPORTED OIL WILL COME DOWN

The United States, acting alone, can disrupt the cartel of the oil-producing governments and bring down the price it pays for imported crude oil.

This would be a drastic policy change. From early, 1970 to the end of 1973, our Government helped and encouraged the cartel. After the price exploded to about $7.00 per barrel, the administration began making faces, wagging fingers, striking attitudes, and warning in heavy tones that someone might go too far. The late King Faisal is said to have been a dour man, but surely we succeeded in making him laugh. In September 1974, our policy was summed up perfectly: while Secretary Kissinger made a "tough" speech in New York and President Ford made a "tough" speech in Detroit, Federal Energy Administrator John Sawhill was asked what plans there were for getting the world price down. He replied there were none. Mr. Kissinger was angry and Mr. Sawhill was fired. By November 1974, the price was up to $10.50 per barrel and is now $11.50. It will be raised again when economic conditions improve.

A monopoly of sovereign states is unrestrained by competition or by any law. They cannot be held to any contract. Shouting or cooing at them deserves and gets only their contempt. An agreement would tie our hands, not theirs.

What we should do is put a limit on U.S. oil imports and sell import entitlements (or quota tickets) at public auction by sealed bids. This would at least contain the cartel and would probably do it heavy damage. The cartel has maintained a remarkable discipline by using the oil companies to limit output, share markets, and let everyone check on everyone else. We can prevent this use of the oil companies without even slightly hampering either their operations or the continuing flow of oil.

The auction system should not be used to reduce oil consumption, or even to reduce imports. For by reducing imports we would lessen supply and eventually raise prices. In this case, the temptation would be strong to allocate or ration the limited imports, thus increasing the burden by trying to hide it. Indeed the main benefit of quota tickets is a lower import cost of oil, although limiting imports can also provide security for investment in the production of domestic fossil fuels and nuclear power.

Source: *Challenge*, January/February 1976.

HOW TO LIMIT IMPORTS WITHOUT A SHORTAGE

The scheme would have to start small in order to establish an efficient routine quickly. Imports should be set at a level equal to what importers would demand at existing prices, with a mandate that the level of imports permitted should not create scarcity in the United States. The control lever would be a careful watch on inventories.

At the end of June 1975, stocks of crude oil and products totaled 1,071 million barrels and covered 69 days' of consumption and 198 days' imports. Only a minor fraction of stocks are actually available to cover fluctions in demand, but that fraction provides us with plenty of room to correct mistakes.

For example, suppose that the Federal Energy Administration (FEA) estimates that demand for imports next month will equal imports a year ago plus an expected 4 percent growth factor. Suppose they have underestimated badly, that demand for imports is really up 10 percent. Then the error would be 6 percent of imports, about 0.3 million barrels a day or 10 million barrels in a month. Stocks would be drawn down by 1 percent. The next month the FEA could raise the import allocation to bring the stocks back up.

The State of Texas (with a little help from Louisiana) used this system for many years. Its task was much more demanding, since it had to control nearly two-thirds of the output east of California, and mistakes therefore had a much bigger impact. Even those who (like myself) questioned the policy, never doubted that it was efficiently carried out.

Frequent auctions—say, once a month—would prevent accumulated surpluses or deficits. They would also help to avoid the disruption of oil trade logistics, and would counter cartel power.

PROTECTION OF DOMESTIC FOSSIL FUELS AND NUCLEAR POWER

Current high oil prices are a strong incentive to expand domestic energy sources, but the incentive is diluted by uncertainty over cartel behavior. We are getting the worst of both worlds—high prices and lagging investment. Let us say that a proposed project can just about return a satisfactory profit at today's prices, allowing for the usual risks. But then, if the investors know there is a nonnegligible chance that the cartel will deliberately cut prices to destroy competition, the investment will not be made.

A tariff, on the other hand, would raise prices and damage the economy, but it would not protect us. The big Persian Gulf producer countries have such low costs that they can absorb any tariff. Worse yet, they could by prearrangement step up imports into the United States, despite the tariff, to undermine domestic prices. Even if a tariff were effective we would not be able to determine how much additional domestic output would be forthcoming at any given price. Therefore we would incur heavy costs without even knowing what we were getting in return.

By contrast, a limit on imports, set at a level where it will not affect the import price, is standing notice that there is an unlimited market for domestic energy sources if the price can be met. For example, if domestic oil production ceases to decline and starts to grow, excess

inventories will accumulate. Then imports must be cut. It is always imports which must move over to accommodate the domestic industry.

In effect, we would be giving an unlimited guaranteed market to domestic energy industries. They could not be undersold by any special price cuts. Of course, if there were a worldwide price reduction, some backstop measure, such as setting an upper limit to imports, might have to be taken. That might force the domestic price above the world price—but it would win us security. Still, as we shall proceed to show, even the higher domestic price could be offset by higher government revenues.

WEAKENING THE CARTEL

If for any reason the cartel broke up today it would reconstitute itself tomorrow. The most strenuous, violent efforts would be made to put it together again. Instead of talking about "destroying" the cartel, we should take measures to contain or damage it. If we need a metaphor, it should be severe erosion, not collapse.

A cartel's weak point is excess capacity. The classic breakdown sequence is: (1) incremental sales at less than the collusive price, with incremental revenues for the cheaters; (2) matching of price cuts, with the bigger cartelists, reluctant to cut, losing market shares to the smaller; (3) accusations, confrontations, and then (4) renewal agreements among the cartelists, but with mutual suspicion and readiness to retaliate. The cycle may be repeated many times before cheating through flagrant price cuts begins to accelerate, and dumping today looks better than bigger losses tomorrow. Then comes a stampede to the exit.

The administration's program to reduce consumption in the United States cannot even annoy the cartel. At heavy cost, reduced oil consumption can increase excess capacity only slightly, with no effect. Since the end of 1973, cartel excess capacity has rapidly built up to about 10 million barrels daily, a third of production. In the spring, it was about 12 million barrels a day. Yet over this very period the price has not only failed to decline but has actually risen from about $7 or $8 to $11.50. Excess capacity by itself will not bring down the price or curb the cartel. An additional 2 or 3 million barrels a day is a normal mild fluctuation. But a large excess is a lever if we have the will to use it.

The cartel has been able to solve the classic problem of limiting production and dividing markets. The producing countries transfer the great bulk of their oil at their fixed price through integrated oil companies which refrain from collusion. (Company collusion has been an influential myth hiding the real source of market power, Government collusion.)

Each company sells all it can and produces only what it can sell. The companies cannot compete by offering lower prices, because their margins are too narrow, roughly 2 to 3 percent of crude oil prices. The market share of each exporting government depends on what its resident companies can sell. It is a somewhat haphazard system, but it works, so long as the governments accept these market shares and do not sell large amounts directly. Hence, despite "participation" and "nationalization," they continue to sell through the companies. But we can remove the companies from the crude oil marketing process,

leaving them in place to produce, transport, refine, and sell products. It would force governments to compete with each other in the American market.

PHASE 1: GETTING STARTED

The first object should be to let the oil trade make the quota auction system a matter of routine. Our motto should be: Start small. The number of tickets issued would be approximately equal to the amount desired, at current prices. Therefore the tickets would have no scarcity value—but only a small convenience or insurance value—since importers and exporters would have to possess tickets to stay in business. Hence there would be enough demand for tickets, and enough oil supply, to meet consumer demand. On each transaction, the importer and supplier would decide who was to bid for how many tickets. They could offer only a few cents per barrel.

Tickets should be sold monthly. I suggest that half of them be valid for the month after the auction, the other half assorted among validity periods of 3, 6, and 12 months. Proportions could be changed later, after public hearings, to suit the convenience of refiners and distributors. Quota tickets should be freely transferable, like stock certificates, recording the name of each transferee and also informing the selling agent, the U.S. Treasury, to prevent counterfeiting. An active resale market in tickets should be encouraged, perhaps by maintaining a public computer file of all wishing to buy or sell tickets.

In any given month, the oil trade could use not only the tickets covering that month's demand, but also the stock of tickets valid for future use. This would permit flexibility in planning, and commitments for months or even years ahead, as long as the system was expected to last. Nobody would ever need to slow down operations for lack of tickets. The value of tickets would also be kept very low during the phase-in period. The producing governments would ignore the auction system, since there would be nothing they could or needed to do about it. Oil would be lifted and sold as before.

PHASE 2: THE EXPORTING GOVERNMENTS ARE FORCED INTO THE ACT

Once the quota auction system was running smoothly, we would have created a market where the cartelist governments could cheat to gain incremental revenues by selling behind each other's backs, each knowing that others might be selling it out.

The secrecy would be achieved by letting anybody bid, with no requirement except a certified check for the deposit. Then cartel governments could use front men. A lawyer or broker deposits a check for several score million dollars, without revealing his sponsor. But the identity of nominal bidders could be kept secret for at least a short time to prevent bugging, tapping, or kidnaping.

There is a second barrier to knowing the real bidders: since tickets could be transferred, a given shipload of oil arriving here could be covered by tickets issued to various people at various times. A third barrier: transshipment terminals are fed by sources all over the world. Oil would be arriving in the United States from the Bahamas, Japan, Rotterdam, France, et cetera. The cost of diversion, reloading, and even mixing would be very small relative to the price. A fourth

secrecy barrier, crude or product exchanges, exists because there would already be a substantial and growing open market. For example, a broker acting for Iraq buys tickets, sells Iraq oil for delivery in Europe and Asia, displacing other oil which the broker ships to the United States, shipment covered by the tickets. Iraq gets the incremental production and revenues. The United States gets the rebates. Some exporting nation somewhere loses U.S. sales and wants to recoup. Because of the transshipment and swapping, higher U.S. sales by some governments would not necessarily indicate cheating. Countries making higher U.S. sales could always explain it—and usually correctly—by better quality, lower sulfur premiums, lower freight costs, better business conditions, and so on.

Cheating would be practical immediately, and it would be very tempting to any nation wanting incremental sales. We assume no cartel nation would try it, at first, while tickets were dirt cheap. But once the value of a ticket exceeded a few cents per barrel, oil companies could no longer afford it. They would be out of the act except as front men. Governments would now have to bid, not only to get additional sales but to keep what they already had.

All barrels imported into the United States would be incremental barrels, up for grabs every month. No exporting country could count on any sales in the American market, through the inside track of its resident companies or through other long-term buyers who had a large U.S. market. The exporting nations would have to keep on buying tickets to compete on equal terms with excess oil from all over the world coming here to find a home.

OPEC capacity is now 38 million barrels daily, and growing. Sales to countries other than the United States account for about 22 million. Thus, taking the rest of the world as safely divided up, there remain about 16 million barrels daily of OPEC capacity and 2 or more million barrels daily of non-OPEC capacity available to supply the American market. But our imports are less than one-third of the 18 million barrels daily. Excess capacity vis-a-vis the United States is proportionately much larger than excess capacity vis-a-vis the whole world.

Frequent auctions would be a convenience to the trade but a torment to the cartel. They would want as little price bargaining as possible, with very few price and sales decisions taken at any given time. When every seller knows what everyone else is charging, he can easily conform. He knows also that everyone is watching him. With monthly auctions there is no time even to start tracing who has bid what. Considering the need to compete for every barrel, it is hard to imagine how the cartel nations could keep running up the price of a ticket month after month.

The revenues from the auctions could be refunded to consumers generally, or used to subsidize low-income consumers, or public transport, or energy research and development. But we should not count the chickens before they hatch.

SPREADING DAMAGE TO THE CARTEL

The cartel would of course try to prevent the spread of competition. But containment would be difficult, costly, and probably impossible. For one thing, other large consuming nations would be watching with

keen interest. However timid and obsequious they had been up to now, our example would be hard to ignore.

Producer countries who lost their market share in the United States in any given month would need to recoup their losses the next month not only in this country but elsewhere. For example, if Venezuela was bid out of the American market, it would lose nearly 40 percent of its revenues and would be forced to sell in Europe. In these days of a huge tanker surplus and very low transport costs, pressure at one place becomes pressure everywhere. Some exporting governments would already have overspent their revenues and more would need money in the future. They would all want Saudi Arabia to act as the industry statesman and cut back production to make room for them. Were there no great excess capacity, Saudi Arabia would accede. It would reason: "The capacity of the would-be chiselers is limited; let them use it fully. Better for us to lose part of the market than to retaliate and risk breaking prices." But for the near future, excess capacity would be so great that if those who wanted to chisel expanded to their limit, Saudi Arabia could be forced down to levels it could not tolerate. (In mid-1975, if Saudi Arabia had shut down completely, capacity would have exceeded demand.) At some point it would have to retaliate and risk disrupting the cartel.

In any case, it would be in our interest to have the lesser producers expand at the expense of Saudi Arabia. The more the Saudis lost their market share, the less concentrated, and hence the weaker, the cartel would be. The biggest producing nation is our chief enemy ex officio, because it is the chief cartelist.

A government which wanted more American sales would need to negotiate with American refiners and distributors, who could offer them a market—if the government provided tickets, or money to buy them. Oil companies large and small would move from being the agents for exporting governments to being their customers. They would shop around for better deals. As customers, oil companies would be working for us, not for the exporting governments.

To make use of the companies as customers, the U.S. Government should sell tickets but should not buy, sell, or allocate oil. A U.S. Government buying monopoly, mediating between customers needing an infinite variety of oil and suppliers seeking to know their customers' needs, would be engaged in "shuttle diplomacy" to the thousandth degree. Even if it did not break down in confusion, it would be counterproductive. Secrecy would be lost, since the supplier would have to identify himself to his customer, the Government. The cartel would need to make only one decision, to fix the price to the one customer. Cartel governments would not be under pressure to decide individually every month how much to bid. We would lose the benefit of their not knowing who was not to be trusted. The more customers they had, the harder it would be to control the better deals some of those customers might be getting.

REACTION OF CARTEL GOVERNMENTS

The cartel nations would probably meet quickly to stop the hemorrhage of revenues to the United States and to other nations following our example. They would surely pledge not to pay rebates, but that would change nothing.

There is no way of finding out the cheaters, who along with non-OPEC nations would have the inside track. To divide the American market among cartel members would be another empty gesture.

The only thing they could do would be to set up a joint selling agency, with exclusive rights to sell all cartel oil. The sooner they did this, the worse matters would be for them and the better they would be for us. The company buffer would be gone. The governments would have the constant divisive job of haggling over market shares. Confrontation in council, month after month, is what they now avoid. We should force it on them. Acrimony and suspicion would be cumulative, increased by frequent meetings and arguments over sharing the burden of excess capacity, which would in turn aggravate the usual difference of opinion about the best price to charge. The OPEC meeting of September 1975, with its still unresolved haggling over small quality and freight premiums, is a mild sample of what we can bring about.

The cartel might buy up all tickets to destroy them. This would be a boycott as ineffective as the "embargo" of 1973–74, when the United States did as well as the "friends" of the Arabs. The production cutback was real. A selective boycott is as impossible now as it was then. If it were tried, prices of tickets would shoot up, benefiting us at their expense. If no tickets were presented for 1 or 2 weeks, the FEA could order special auctions, extend the expiration dates of all outstanding tickets or increase their value, or at worst briefly suspend the import limitation. Since the United States accounts for only 12 percent of cartel production, even a very low rate of defection would suffice. Furthermore, as governments boycotting the United States tried to recoup their losses in sales, there would be great downward pressure on prices everywhere else in the world.

IS THERE A CASE FOR DOING NOTHING?

Many people in Washington were confident, in early 1974, that the price would soon come down without our doing anything about it. It has since risen by half. Spontaneous reduction looks even less likely now than it did then. In my opinion, the dominant cartel members have increased long-run earnings by raising the price. But even if they preferred a lower price they would find it necessary to raise the price as a bribe to the smaller producers, who want to get more money immediately. In return, the smaller countries restrain output instead of shading prices.

Time is not necessarily on the side of the consumer nations. Excess capacity can be gradually worked off. Some expansion plans have already been sharply cut back in the smaller countries. Smaller and militarily weaker producers will be afraid to expand capacity. Thanks to American armaments and training, Saudi Arabia and Iran will soon be able to occupy some oil-rich neighbors and stop production. The mere threat may suffice. The fewer the members, the stronger the cartel and the worse for its customers.

This administration's obsession with expanding Saudi Arabian capacity is the worst possible strategy. The higher its market share, the less room there is for others, the stronger the cartel. An auction quota scheme would provide unlimited sales for small countries, at the expense of the larger ones.

WHAT IF THE SCHEME FAILS?

If the scheme fails, we lose nothing and gain some respect from the cartel. Showing them that we understand our plight and are looking for ways to oppose them should make them at least a little more cautious.

"Dialog" with the oil exporters, as a group, has been taking place for years. It goes like this: They: "This is it." We: "Yes, boss."

An auction quota scheme would be an invitation to genuine dialog with each individual exporting country. Then we would say: "If you want to sell oil in the States at your rivals' expense, see us next month."

Demand in the Next Ten Years

Very wide variations in demand for OPEC crude oil over the next 10 years are a possibility foreseen by a recently-published study [1] which bases its projections on four main factors influencing consuming countries' requirements. According to these projections, demand for OPEC oil could be as high as 43.4 million barrels per day by 1985, or as low 15 million b/d, compared with an actual demand of 28 million b/d in 1974.

The authors of the study say their purpose is to contribute to a better understanding of likely paths for the evolution of future developments in the energy market, and the underlying determining factors of such evolution. But they also caution readers against depending on the study model as a sole method of projection, and point out that the model is primarily an aid to, and not a substitute for, judgment or policy.

There are two main features of the study model—demand-supply relationships, and "systems dynamic" technique. In the demand-supply relationship, the effective demand for energy in any one country or area is stated to depend on the size of gross national product (GNP), its growth rates, and income (GNP) elasticity of energy consumption. Demand for OPEC oil by non-OPEC countries is calculated as a residual after the satisfaction of energy consumption from non-OPEC sources (that is, indigenous and imports). The authors claim that the use of "systems dynamics" techniques enabled them to include and integrate in one model the multiple and changing factors mentioned above and their complex relationships in the energy market.

OIL PRICES AND OPEC REVENUES

One key assumption of the model is that the export price for OPEC "marker" Arabian crude, f.o.b. Ras Tanura, remains at the November 1974 level of $10.46 per barrel for direct oil deals and $9.80 per barrel for participation crude over the whole period 1975–85, at constant 1974 dollars. (The authors argue that for a working hypothesis, it is easier to start with an actual price "as compared with adopting prices which are being debated or unknown to us".) But to provide the model with a measure of "realism and flexibility", a supplementary projection of world energy demand and supply at a lower oil price level of $8.00 per barrel (in 1974 U.S. dollars) is made.

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[1] An analysis of World Energy Demand and Supply (1974–85), with Special Reference to OPEC Oil. A joint study by Professor Zuhayr Mikdashi (American University of Beirut) and a team of experts from The Research Institute of Overseas Investment (The Export-Import Bank of Japan).

Source: *Petroleum Economist*, January 1975.

The base year used in the study is 1974 because information for that year is nearly complete. It is assumed that OPEC oil reserves will remain constant over the period 1975–85, which means that the decrease in reserves resulting from exports and domestic consumption would be compensated for by new discoveries of the same magnitude. It is also assumed that consuming countries' effective demand for OPEC oil would be equal to OPEC oil exports, implying no change in stocks, and if any OPEC country, excluding Saudi Arabia, cannot fully meet demand at the stated prices owing to limited reserves or production capacity, then Saudi Arabia's oil is assumed to fill the resulting gap.

The authors point out that the capacity of the various OPEC members to absorb oil revenues has a significant impact on their oil export policies. When world demand for OPEC oil rises, the country with low financial reserves per capita will normally try to respond more readily to meet demand. When demand for OPEC oil declines, OPEC members in greatest need of additional oil revenues (countries with relatively large populations and high levels of socio-economic development; namely Indonesia, Nigeria and Algeria) are assumed in the study to maintain oil export levels, while countries with less pressing need for oil revenues (Abu Dhabi and Libya, for instance) would accept cutbacks in exports—assuming that all OPEC countries are concerned about maintaining oil price levels.

FIVE "SCENARIOS"

Thus, the five "scenarios" used in the model are based on four "independent" variables—annual GNP growth rates in consuming countries; GNP elasticities of energy consumption (the ratio of change in energy consumption to a 1 percent change in GNP); indigenous supply of energy outside OPEC and socialist centrally-planned countries; and the ratio of non-OPEC energy imports to total imports of energy. The first four scenarios use a $10.46 (1974) export price per barrel of OPEC marker crude. The first (see accompanying tables) represents the highest-possible demand for OPEC oil, followed by moderate and reduced demand with, finally, the lowest demand possible. The fifth is based on a lower export price of $8 per barrel (1974) and yields a correspondingly higher demand for OPEC oil.

TABLE I.—OPEC: OIL DEMAND FACTORS

	GNP growth rates of consuming countries (annual average percent)[1]			Income (GNP) elasticity of energy consumption[2]		Indigenous energy supply in consuming countries[1] (million barrels/day oil equivalent)[1]				Ratio of Non-OPEC energy imports	Oil export price basis (per barrel)
Scenario	Case	1974–80	1981–85	Case	1974–85	Case	1974	1980	1985		
1	High	4.7	4.6	High	1.0	Low	46	61.0	74.7	Low	$10.46
2	do	4.7	4.6	Low	.8	do	46	61.0	74.7	do	10.46
3	Low	3.5	3.8	do	.8	do	46	61.0	74.7	do	10.46
4	do	3.5	3.8	do	.8	High	46	69.4	87.8	High	10.46
5	High	4.7	4.6	High	1.0	Low	46	61.0	74.7	Low	8.00

[1] Excluding Socialist areas and OPEC.
[2] The ratio of change in energy consumption to a 1 percent change in GNP.

TABLE II.—OPEC: CONSUMERS' DEMAND

Scenario	Consuming countries' total energy demand (million barrels/day oil equivalent)[1]				Consuming countries' total demand for OPEC oil (million barrels per day)[1]				OPEC total international foreign reserves (thousand million U.S dollars)			
	1974 (prel.)	1980	1985	1974–85 annual average change, percent	1974 (actual)	1980	1985	1974–80 annual average change, percent	1974 (actual)	1980	1985	1974–85 annual average change, percent
1	74	96.9	121.5	4.7	28	33.4	43.4	4.1	53	327.8	449.3	21.5
2	74	91.9	110.3	3.7	28	28.8	33.1	1.5	53	297.1	323.4	17.9
3	74	87.0	101.1	2.9	28	24.2	24.5	[2] (1.2)	53	265.7	202.3	13.0
4	74	87.0	101.1	2.9	28	16.0	15.0	[2] (5.8)	53	188.2	—8.4	
5	74	96.9	121.5	4.7	28	33.4	43.4	4.1	53	223.7	218.4	13.9

[1] Excluding Socialist areas and OPEC.
[2] Negative change.

According to the first scenario, demand for OPEC oil could increase to 43.4 million barrels per day by 1985, at an annual average increase of 4.1 percent, with the growth of total energy demand put at 4.7 percent a year. The share of OPEC oil would continue to be about 35 percent of total energy demand and 60 percent of total oil demand in the years 1975–85. Oil exports would generate for OPEC members financial reserves rising from an actual $53 billion (thousand million) in 1974 to $449.3 billion in 1985 (all expressed in constant 1974 U.S. dollars).

Least demand for OPEC oil is the outcome of scenario four which shows a decline in world demand for OPEC crude from 28 million barrels per day in 1974 to 15 million barrels per day in 1985. World energy demand until 1985 would increase at a low rate of 2.9 percent a year. This low increase in demand for energy, say the authors, together with the development of indigenous energy supplies, would make total oil demand in consuming countries remain almost constant between 1974 and 1985. International financial reserves of the whole OPEC area could reach a peak of $188.2 billion in 1980, declining sharply thereafter to a deficit of $8.4 billion in 1985.

The authors expect that the evolution of OPEC oil exports and financial reserves could fall within the wide range of scenarios 1 and 2. Thus, the intermediate cases of scenarios 2 and 3 might be more likely. In conclusion, the authors claim that their study has brought to light "the interdependence of governments, enterprises, producers and consumers at the transnational level" and they accordingly suggest that closer cooperation is needed between producing and consuming countries.

Pressures on OPEC Prices

Now that there is a good prospect of the industrialized countries making a moderate economic recovery in 1976, the behaviour of crude oil prices in the immediate future is crucial if that recovery is to be sustained. The many economic and political pressures working on OPEC prices will undoubtedly increase as the year progresses, influencing trends which could take them either up or down. Much thought is being devoted to the question of which way they will go.

The massive price increases made by OPEC in 1973 and 1974 were themselves partly responsible for the recession. However, the resulting fall in oil consumption and the further development of alternative energy sources were sufficient to curb the demands of the more militant exporters for further large increases. After a period of uncertainty, the oil importing countries have more or less come to terms with the present price structure. The world's financial institutions, in spite of gloomy predictions to the contrary, have managed to cope with the huge transfer of wealth from the importing to the exporting nations, and an equilibrium of sorts has been achieved.

An important factor in this has been the sense of responsibility shown by most OPEC members and a growing awareness of the worldwide effects of their actions. However, should the industrial recovery tempt OPEC along the same line it adopted in October 1973 of ever-rising prices, then the world will soon be in economic difficulties again.

RISING DEMAND

Energy demand must inevitably rise with economic growth, with the question of oil supplies and prices vital to any projections of the future. But since OPEC seized power, and largely because of it, the situation has become far more complex. Not only must the policy decisions of the exporting countries be taken into account, but also those of the oil importing nations. This is why the adoption of the Energy Policy and Conservation Act in the United States of America, summarized in the following article, has such important international implications. Other factors include the rising economic expectations of the non-oil producing developing countries and the overall trend in world energy demand and supply, the latter being the subject of a new Arab-Japanese study (see page 46).

All these considerations will play a part in the future of OPEC prices to which much thought is being given. An example of the more-optimistic viewpoint was presented at last month's meeting of the London Oil Analysis Group by Prof. Colin Robinson, professor of economics at Surrey University. He outlined three alternative scenarios

Source: *Petroleum Economist*, February 1976.

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for OPEC price behavior, in which the actual prices quoted were all related to the Arabian light "marker" crude free on board Ras Tanura. The possibilities were as follows:

—The price will rise, at best, by another 7 to 10 percent late this year. A year from now oil prices generally will drift down, either through concealed or open discounts, $9–$10 a barrel (in current dollar values) for the "marker" crude by the early 1980's. The reasoning behind this possibility is that OPEC members have already lost the ability to increase oil prices.

—Oil prices will be increased, ad infinitum, in relation to the rate of inflation in industrial countries because the OPEC cartel will hold. (Professor Robinson, who worked inside the oil industry for some years, said that many oil companies believe in this proposition.)

—Oil prices will decline drastically to $6–$7 a barrel for the "marker" crude by the early 1980's, after they have strengthened somewhat later this year (again in current dollar values). However, they will not go down below the $6–$7 level because of some sort of arrangement adopted by oil-consuming nations to protect alternative energy forms.

Professor Robinson's own "probable" assessment is the first, namely a limited decline in actual oil prices during the next 5 years. He added that a rather slow erosion of oil prices in real terms was also quite likely. His argument is that OPEC will hold together for economic and political reasons only in the short term. However, in the long term, individual countries would pursue their own economic interests and start price cutting—something they could easily do as the going price of crude oil is far in excess of actual production costs. Oil companies, which have seen their production taken over by the states, would tend to buy oil from countries offering it cheapest.

In Professor Robinson's opinion oil prices could go on increasing only if OPEC members can agree on rationing production amongst themselves. This might well be achieved as a reaction to a price war. Professor Robinson said that the mass of literature written during the 1960's on coming shortages of raw materials had been very influential in persuading some OPEC countries to hold down production and use oil in the ground as an investment. This was very much an economic phenomenon arising from "expectations about prices," he stressed.

Professor Robinson considers that it is a matter of judgment whether the predicted economic recovery would take up the marginal oil-production. It would take quite a long time for the United States of America to rely more heavily on OPEC crudes and he does not agree that U.S. energy policy would tend to strengthen OPEC's hands. Countervailing oil supplies would be coming from the North Sea and Alaska, with other forms of energy also causing changes in the overall energy market.

FACTORS FAVORING OPEC

Professor Robinson's view that OPEC as a cartel has basically lost the ability to determine higher prices may well prove optimistic. OPEC has survived a large reduction in oil demand and even increased prices slightly, only offering discounts on the higher "marker" crude level in the form of price differentials. Although no official pro-

duction-rationing system exists within OPEC, individual countries like Saudi Arabia and Kuwait have cut back severely, enabling others such as Indonesia, Iraq and Gabon to maintain or even increase their output.

OPEC's ability to hold together even during a serious worldwide recession will not be lessened when demand for oil starts to rise as a result of economic recovery. The highest real growth in GNP is being predicted in the two crucial oil-consuming countries, Japan and the United States of America, for which the latest OECD survey gives upswings of about 5 percent between the second halves of 1975 and 1976. It is also likely that the demand for OPEC oil by the United States of America will tend to grow by the adoption of a weakened energy policy, declining indigenous production of oil and natural gas, and the scaling down of Canadian oil exports to the United States of America. Decisions to considerably increase crude oil stockpiling in the U.S.A. and other OECD countries, will also help fortify the demand for oil in the period to 1980. Last, but not least, there is the lack of political will in the oil-consuming countries, including the European Community (see *Petroleum Economist*, January 1976, page 27), to take decisive steps to achieve the highest possible levels of energy independence.

Hostages to Fortune

Mr. Richard Nixon's bright vision of energy independence by 1980 has faded from the American mind. The reality now to be faced is that, in the absence of a revolutionary change of heart, the United States of America must rely increasingly on imported energy supplies. More specifically, it must accept a growing dependence on OPEC oil. How does it come about that a nation with such prodigious resources of coal, oil, natural gas, oil shales, tar sands, waterpower and nuclear know-how is content to accept a relatively high degree of dependence on outside supplies?

The present policy—if it can be dignified by such a title—is the reverse of that pursued in the fifties and sixties. The view then taken was that national security demanded continuing restrictions on oil imports and acceptance of an oil price level higher than that prevailing in the outside world, so as to stimulate domestic production. And that was at a time when super-abundant supplies made oil a buyers' market.

The change of attitude that has taken place despite OPEC's convincing demonstration that oil is now a sellers' market is attributable to a number of factors. They include a mod of complacency induced by the speedy return of the international oil business to an appearance of normality after the Arab oil embargo; apparent reluctance to follow the lead of a far-from-popular President; the unwillingness of politically conscious Congressmen to court unpopularity by sanctioning a rise in oil prices; the successful blocking tactics of the environmentalists; and perhaps the sheer affluence of the United States of America which allows it to shrug off the financial burden of growing energy imports. Whatever the reasons, the American people may come to regret the decisions that have been made on their behalf.

It was at the end of 1973, after the Arabs had shocked the American public by causing shortages of gasoline and other products, that President Nixon announced his aim of energy independence by 1980. He called for a program that would reduce the growth rate of energy consumption and stimulate more rapid development of domestic resources. He demanded in particular a more vigorous search for oil and gas and a bigger reliance on coal, nuclear power, oil shales and the newer forms of energy.

The attempt to translate this vision into a practical program of action occupied the administration for much of 1974, during which time skepticism about the objectives mounted and President Nixon departed from the political scene. His successor, however, in his State of the Union message at the beginning of last year, announced specific proposals to achieve the same end, including measures to conserve energy, stimulate production, provide strategic reserves of oil and set up machinery to deal with any future energy emergency. Basic to his

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Source: *Petroleum Economist*, February 1976.

thinking was the conviction (self-evident to most economists) that greater independence could not be achieved if oil prices continued to be held down by official controls at a level far below that of the world market. He could not himself remove the controls, but in February he took the initiative in imposing an additional $1 a barrel duty (described as a "supplemental fee") on imported crude oil—later raised to $2 a barrel.

The President unhappily faced a hostile Congress. Since all price increases are unpopular, the elected representatives of the people were unwilling to incur the odium of freeing oil from price control, especially in view of the current unpopularity of the oil companies who were being made scapegoats for the failures of government policy. After a long wrangle, Congress eventually (in early December) passed the Energy Policy and Conservation Act which Mr. Frank Zarb, head of the Federal Energy Administration, reckoned was the best that could be secured from Congress on the eve of an election year. Against the advice of much of the business community—not to mention the oil companies—Mr. Ford signed this long and complex act on the eve of the Christmas holiday.

PROVISIONS OF THE ACT

This measure goes some way toward providing the powers requested by the President, though the effectiveness of some of its provisions is difficult to gage at this stage. At least it provides for building up a strategic oil reserve of up to 1 billion (thousand million) barrels in 7 years. It authorizes the President to prepare comprehensive plans for dealing with any future oil emergency, to set energy conservation targets for the 10 most important energy consuming industries, and to fix energy efficiency targets for each category of appliance. It authorizes U.S. participation in emergency oil-sharing arrangements through the International Energy Agency. It provides financial guarantees for companies opening up new coal mines, and grants to assist the individual States in the development of their own energy conservation programs. It imposes on the automobile industry the fuel efficiency standards for 1980 previously agreed on a voluntary basis, and lays down rather more stringent standards for 1985.

What the act emphatically does not do is to accept the President's call for the elimination of crude oil price controls, though it does envisage the dismantling of some of the existing price and allocation machinery affecting wholesalers and retailers. The act extends crude oil price controls for over 3 years (40 months), with no guarantee that the market will then be freed. As from February 1, indeed, it decrees an actual reduction in prices, which is estimated to cost the oil industry about $3 billion this year.

Hitherto, the price of "old crude"—output related to the 1972 level of production—had been fixed at $5.25 a barrel. "New crude", which now makes up about two-fifths of domestic production, was uncontrolled and was selling at prices up to $14 per barrel; the overall average price of domestic crude was thus reckoned to be $8.75 per barrel. Under the new act, the weighted average price of old and new crude together is set at $7.66 per barrel. On the assumption that old crude is unchanged in price, this would imply an average price of about

$11.28 for new crude—a reduction of the order of $2 a barrel. This reduction, plus the removal of the supplementary import duty of $2 a barrel on foreign crude, will lower refiners' costs over the industry as a whole by something like $1.30 a barrel, making possible a politically welcome reduction in product prices.

Congress did not, of course, decree that the new prices should remain unchanged for the next 3 years. The act gives the President the power to increase the composite price monthly if necessary to offset the effects of inflation and also to give a modest "production incentive" (not more than 3 percent a year), provided, however, that the total increase does not exceed 10 percent a year. In addition, each 90 days the President may propose an uprating of the production incentive and of the overall 10 percent annual limit—but the proposal may be vetoed by either House of Congress on a simple majority vote. After April 1977, the President may propose that Alaskan oil should be excluded from the composite price calculation, but this too can be vetoed by either House.

A LOW-PRICE AREA

The Energy Policy and Conservation Act thus introduces a large element of uncertainty into the oil scene, especially in regard to prices. Energy Chief Frank Zarb said that the Administration's objective during the next 40 months would be to raise the domestic price of crude oil to somewhere near import parity. But no one can be sure whether this objective is attainable. In the meantime, the United States of America will remain a relatively low-cost area in a world of high-priced oil.

To any consumer the most powerful incentive to economise is a rising price. This month's reduction in oil prices must encourage the feeling that the call for economy need not be taken too seriously. Last autumn's forecasts of 1976 domestic oil consumption envisaged a rise of 4 to 4½ percent, to a total of around 17.2 million barrels a day. The price reductions are now expected to boost that figure by 100,000 to 200,000 barrels per day. As economic recovery gathers momentum, the curve of demand for petroleum products will continue its upward trend.

Crude oil production, on the other hand, has been declining since the 1970 peak of 11,312,000 barrels per day. It was down to 10,453,000 barrels per day in 1974 and to under 10 million last year. The downtrend is expected to continue until Alaskan oil starts to flow late next year at an initial rate of about 1.2 million barrels per day, increasing perhaps to about 2 million barrels per day by 1980. The important North Slope deposits, with proved reserves generally estimated at around 9.6 billion barrels, were located as long ago as 1968, but have not so far made any contribution to the supply position because of the successful opposition of the environmentalists.

The downtrend in crude oil production is attributable to the steady decline in proved reserves, now estimated by the API at some 34 billion barrels. This does not mean that there are no more oilfields awaiting discovery. On the contrary, the U.S. Geological Survey reckons, despite a drastic scaling down of its earlier estimates, that there are still a probable 50 to 127 billion barrels of oil to be located. (Exxon reckons that one-half of the country's crude oil production in 1990 will

have to come from reserves not yet discovered, mainly in Alaska and offshore.) The snag is that the bulk of these undiscovered resources lie on the continental shelf or in inaccessible inland areas where exploration and development costs are very high. And the incentive to embark on the costly and arduous search has been greatly weakened by high taxation, price controls, and the general attitude of hostility and uncertainty that has lately surrounded the industry. Evidence of this disincentive was forthcoming in December when the administration, having screwed up its courage to auction 1.3 million acres of federally owned territory offshore California, received offers for only about one-third of the territory. As President Ford is well aware, an essential requirement of a more active exploration program is a higher level of crude oil prices.

DISINCENTIVES TO DEVELOPMENT

The same disincentives tend to hamper the exploitation of the country's vast oil-shale resources. It was in January 1974 that the Government offered the first of six tracts of Federal shale-bearing land in three States, with the object of establishing whether the estimated 600-billion-barrel reserve of oil could be economically developed. One interested company was Occidental, which had developed its own *in situ* technique of extracting oil from the rock. That company announced at end-1975 that it intended increasing its investment in its shale-oil project despite recent Congressional action in preventing the grant of Government-guaranteed loans to pioneer producers of synthetic fuels.

At about the same time, however, Atlantic Richfield announced that it was relinquishing its quarter share in an oil-shale tract in Colorado that had been acquired in the 1974 auctions for the sum of $117.8 million. The company's spokesman reckoned that "oil shale development in the near future appears economically impossible owing to continued inflation of production costs and government actions, that discourage shale development." Another partner in the same venture, The Oil Shale Corp. (Tosco), which has done pioneer work in this field, also announced its intention of pulling out. The remaining two partners, Shell and Ashland, have said that they will carry on the experimental work for the time being at a reduced rate, though Shell has complained about the disincentive effect of price controls and the cutting of the depletion allowance.

INTERNATIONAL RAMIFICATIONS

With the curve of demand rising and the curve of supply falling, the inevitable consequence is increasing dependence on oil imports, which now cover 37 percent of the country's requirements. Imports have risen from 3.5 million b/d in 1971 to over 6 million last year. A recently Library of Congress study foresees a further rise to 9 million b/d in 1977 and to 10 million by 1980, while a recent paper by Mr. John H. Lichtblau, executive director of PIRINC, envisages an import requirement of up to 12 million b/d in 1985.

Since Canada is scaling down its exports, with the intention of eliminating then altogether in 1981, and since Venezuelan supplies are also declining, U.S. dependence on Middle East (mostly Arab) supplies will be all the greater. The implications of these trends from the standpoint of national security are troubling the minds of many thoughtful people in the United States of America today.

America's increasing reliance on imported oil is also a cause of concern to the rest of the importing nations, most of whom have only meager oil resources of their own. Because U.S. refiners can cover near two-thirds of their throughput requirements from relatively low-cost domestic production, they can afford to bid up the price of the imported supplies needed to make up the balance. This plays straight into the hands of OPEC, tempting the cartel to engineer a further increase in the general price level. It would have been much better for the free world as a whole if Congress had accepted Mr. Ford's contention that U.S. oil prices should be allowed to rise to something like the world market level.

The OECD and Its International Energy Agency

(By Ulf Lanzke)*

THE SCOPE AND OBJECTIVES OF THE INTERNATIONAL ENERGY PROGRAM

Although the industrialized countries were inadequately prepared to cope with the crisis in a coordinated manner, the basic similarity of their interests was always apparent. The initiatives taken to reconcile the differing policies of the Western World seem, in retrospect, entirely natural. The initial step, taken by the U.S. Government in a conference convened on February 13, 1974, saw the beginning of a period of intensive negotiation among the industrialized countries; the objective was to establish a new foundation for energy cooperation within the Western World. These negotiations resulted in an explicit and detailed agreement on an international energy program which was signed by 16 member countries of the OECD on November 18, 1974. The scope of the agreement is ambitious; it covers every major energy-policy issue. It is all the more ambitious because the cooperation intended under the agreement has had to be built from fairly unsubstantial bases, and because it must confront the fact that energy policies in member countries are now divergent.

The objectives of the program, centered on more stable and equitable supply conditions in the world, seek to provide assurances against the disruptive effects of oil emergencies; these involve a greater independence from imported oil, the broadening of cooperative relations among the participating countries and between other producing and consuming countries, and the establishment of an international system to make available more information and greater predictability regarding oil-market developments.

The most developed part of the program relates to the precautions to be taken against the possibility of new emergencies. The basic principles of the system may be summarized as follows: Each country will have to build up its own emergency self-sufficiency in oil supplies to cover an initial period of 60 days, thereby securing, in case of crisis, an inadequate buffer to allow for cooperative political action. In the event of crisis—a term specifically defined as a reduction in the daily rate of oil supplies of the IEA countries as a whole, of a single member, or a few—a sharing system is activated. The system aims at equitable burden-sharing among the participating countries including a common reduction of demand on the basis of explicitly identified measures. Finally, the emergency system provides for political consultations that will enable participating countries to undertake joint action to meet the requirements of the crisis.

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*Executive Director of the IEA.

Source: DAEDALUS Fall 1975.

The longer-term objective of reducing dependence on imported oil has to be tackled by influencing the overall demand and supply situation through deliberate conservation programs, through enlarging available energy resources, and through developing new forms of energy. This section of the program is probably, for the long-term future, the most important; it is also the most difficult. Consuming countries are not accustomed to deliberate policies of energy conservation, and consumers, so long as energy costs were comparatively low, were not in the habit of giving much attention to this subject. The development of new energy resources is expensive, technically complicated, and potentially disturbing to the competitive position of individual economies. As for research and development on new types of energy, these have concentrated in the past on nuclear energy to the almost total neglect of other resources.

It is understandable that, given the complexity of the negotiations, the brief period between February and November 1974, did not suffice to develop very detailed targets and explicit modes of cooperation. It became necessary to rely on agreements in principle and on procedural arrangements for work programs that would subsequently be developed. In any case, the justification for this part of the program is independent of the current situation in the oil market and of relations between consumer and producer countries. Given the enormous periods of time that must elapse between results in research and development and their large-scale economic applicability, the benefits of energy sources now being developed can only be expected to accrue to future generations.

Greater understanding of what is going on in the oil market is another issue of major political importance. Until the crisis, there were substantial differences in the amounts of information available to individual countries. The host countries of international companies tended to have better access to information, though public antagonism to the activities of the companies had already begun to build up in these countries even then. Because everyone recognizes that the companies are highly efficient managerial instruments for dealing with the problems of vastness and complexity involved in supplying the world with oil, there is considerable respect for their ability. At the same time, a certain amount of ambivalence exists in both governmental and other circles about the role of the multinational oil companies; further, public criticism of these institutions, insofar as it is based on emotion rather than fact, can lead to a loss in their efficiency. It is in the interest of both the governments and the oil companies to resolve these conflicts before they endanger the smooth functioning of the world oil market. The improvement in general information envisaged in the international energy program should help to direct future discussions of these problems into clearer and more objective channels.

The improvement of relations between producing and consuming countries is of vital importance to both sides. For a considerable time to come, the consuming countries will be dependent on the producers for securing their oil on reasonable terms; they will have a natural interest in a better integration of the world economy. Producing countries are similarly dependent for their well-being on good relations with the industrialized world. While, for the immediate future, they

remain the major outlets for oil, the industrial countries still provide both the means and the opportunities to help them broaden and diversify their existing economic structures. Both sides stand to gain through an amicable development of their relations; both stand to lose by a continuation of adversary or restrictive policies.

POSSIBILITIES OF SUCCESS

The International Energy Agency of the OECD, created by a decision of the council of the OECD on November 15, 1974, is the instrument for the realization of this ambitious energy program. As these words are being written, the Agency is just 6 months old—far too short a time to judge its effectiveness. The work already accomplished by the member countries is, however, encouraging and the institutional and operational organization of the Agency favors substantial accomplishment. New elements in the structure of the Agency distinguish it markedly from other international organizations of a similar kind. In contrast, for example, to the EEC, the Agency is not territorially limited, and it can therefore provide for international energy cooperation on a world-wide basis. Only France, among the major industrial countries, has chosen not to join the IEA. In contrast to its parent organization, the OECD, the Agency is not bound to the principle of unanimity. In contrast to the economic bodies of the United Nations, as well as the United Nations itself, the interests are not so varied as to impede concrete progress on the specific issue of energy.

Accordingly, the present combination of institutional features and circumstances encourages achievement: broad geographical scope, narrow functional objectives, abandonment of the rule of unanimity, and avoidance of certain of the old adversary relationships that have restricted the ability of industrialized countries in the past to work together effectively. Moreover, in the emergency scheme, the oil industry continues to be responsible for the system's practical implementation and thus has parallel interests. These factors converge to create confidence that a new oil crisis would be far better managed by the governments than was the case last time.

In the field of long-term cooperation—conservation, development of alternative energy resources, and research—the initial work of the Agency has been equally encouraging. Policies have already been developed that reach beyond the consensus contained in the agreement itself. Concrete conservation targets have been set for 1975, and basic commitments have been undertaken by member governments on targets for the future. Consensus has been reached on a system favoring the development of alternative energy sources, and energy research projects have been developed to a point where their practical implementation is only a question of time. Moreover, a general information system on the oil market is by now well established; the first round of data has been supplied, and its analysis and use is now possible.

The most difficult area so far has been the improvement of relations between the oil-exporting and the oil-importing countries. A preparatory meeting in Paris, from April 7 to 16, 1975, between representatives of the two groups was not able to reconcile their different views concerning the scope of a conference planned for later

in the year. The industrialized countries felt that the agenda ought to be restricted, with energy and energy-related questions as the focal point; the producing and developing countries wanted a more general agenda that would include most of the economic issues now being disputed by the developing world and the OECD countries. By the summer of 1975, some bridging of this gap seemed possible, as the U.S. Government showed a greater willingness to broaden the scope of the proposed talks.

But even if this meeting does not produce immediate results, it seems obvious that direct contacts and better relations remain the principal objectives of the Agency. Indeed, the importance of oil to both sides emphasized the primacy of those objectives. In 1974, approximately 1,100 million [1] tons of oil, valued at $90,000 million, were exported from the OPEC countries into the OECD area. This amount represented nearly two-thirds of the oil supplies of the consuming countries and four-fifths of the production of the OPEC countries. Given these conditions, it is difficult to imagine how the parties can fail sooner or later to settle the problems that separate them.

Finally, a more general point has to be mentioned, if one is to take accurate stock of OECD's and IEA's present energy activities. The secretary-general of the OECD has provided in his report, "Energy Prospects to 1985," a valid assessment of future energy developments and the needs of energy policy. This study must be regarded as only a starting point, since the abrupt and far-reaching changes in the supply conditions that developed in the early 1970's are without precedent. If it is to serve as an instrument for the future development of energy policy, its assessment will have to be regularly updated.

Comparing the situation between the OECD countries—and even within the EEC—prior to October, 1973, with the situation that now exists, one can only conclude that the radical changes in the oil market have led to equally radical changes in the willingness of industrial countries to cooperate on energy. The emergency system has undergone substantial improvement; the basis for long-term cooperation has been established; the idea that oil consumers have common interests has made very considerable progress. One must realize, however, that the real tasks still lie ahead, and that the IEA will be successful only if member governments remain determined to achieve larger results.

At present, there is some danger that public awareness of the problem may diminish. Such a development would be disastrous, because in 5 or 6 years the results of a "business as usual" attitude would be keenly felt. The present excess of oil production should not mislead anyone into assuming that the situation has not changed in basic ways. Most of the potential elements of crisis remain; in the longer term, the additional elements of a more general energy-supply crisis are becoming apparent. It is, therefore, of vital importance that the underlying roots of the difficulties in energy supply—short term and long term—be kept constantly in mind. If the energy problem is not to constitute a source of permanent unrest in international relations, the different regions of the world will have to undertake a continuous effort at cooperation in solving the world's energy problems.

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[1] Figures in this paper are expressed in millions of tons in order to give the reader an easier grasp of the order of magnitude involved. To convert tons per year into a rough estimate of barrels per day, divide the tons-per-year figure by 50.

Can Middle East Producers Preserve Their Petro-Wealth?

(By Dr. H. A. Merklein*)

The potential wealth of Middle Eastern petroleum exporting countries is enormous—indeed, nearly incomprehensive. But, unless carefully administered, this wealth may be exhausted. If this were to happen, it would return people in this area to a relative wealth status similar to the one they experienced before emergence of oil as a major world resource. History abounds with examples of peoples who, for one reason or another, had enjoyed a brief span of extreme wealth, only to slide back to obscurity.

Preservation of their current oil wealth is, and ought to be, the chief concern of Middle Eastern oil exporting countries. After the wealth-acquisition phase, the wealth-preservation phase is the logical continuation of present policies. Incredibly, this second phase will prove to be much more difficult than the first one.

For one thing, time works against the oil-rich countries, as it does all wealthy countries, including the United States. The older generation in this country well remembers the deprivations of the Great Depression in the early 1930's or during the Second World War. The memory of past poverty can never be completely erased, and this builds up defenses in consumption patterns that seem ridiculous to the younger generation. The fact is, young Americans, born into wealth, don't know how to be frugal. This is one, not the only one, of the great problems facing America in these days of reduced national wealth.

Chances are this problem will be faced, in a much more severe form, by the currently oil-rich nations. More severe, not because of a difference in people's reactions to wealth, but because of the all-or-nothing nature of some of these nations' resource bases. Countries whose economies are built on exploitation of a single resource are, to use a banking term, overexposed in a given commodity and, for that reason, vulnerable.

In speaking of vulnerability, it is not suggested that OPEC may break up under its own weight. Surely, the economists who have pursued that lines of reasoning must have come to admit their error. The classical cartel vulnerability, preached by the economic profession throughout the western lands, has been shown to be no more than a classical error.[1]

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[1] Merklein, H. A., "The Energy Crisis: Some Causes and Effects; part 3: A Look at International Oil, the OPEC Cartel and Windfall Profits," *World Oil*, March 1974, pp. 47–72.

Source: WORLD OIL, December 1974, 78–88.

IF OIL-EXPORTING NATIONS ARE DENIED THE RIGHT TO INVEST IN U.S. CORPORATIONS, THEY WILL HAVE NO ALTERNATIVE BUT TO CUT BACK ON OIL PRODUCTION

What is meant by vulnerability is the kind of long-run exposure to the consequences either of the development of substitute energy or of a natural decline of Middle Eastern oil reserves. Either event is at least one, probably two, generations away. But one thing is absolutely sure: One or the other of these events is bound to occur.

The first order of business in preserving current oil wealth is to investigate the possibilities of converting an oil-exporting nation from a single to a multiple resource base. This may be possible in some Middle Eastern countries, in others not. Where possible, it is the safest investment that can possibly be made, since it falls under the exclusive national, legal and economic control of the resource-owning nation. Neither devaluations, expropriations nor inflations can take a direct toll out of such a resource.

On the other hand, one of the most wasteful errors a country can commit is to use its present wealth to build up an industry that cannot in the long run support itself. The classical example of this type of error in economic thinking is the developing country bent on having its own steel industry.

Developing countries should have a steel industry only if that industry can be developed into a viable and competitive economic life. The comparative advantage, discredited as it is today by Marxist charges of being a tool of capitalist exploitation, is nevertheless a very real concept that will not be ignored, except at great costs to those who ignore it.

Leading Middle Eastern contenders for development of alternative resources are Iran and Saudi Arabia. But even these two countries have vast excess funds to invest elsewhere. Thus, for them and other Middle Eastern oil producers, the question is to invest where and in what.

OIL-EXPORTERS MUST EVENTUALLY AND PREDOMINATELY INVEST IN REAL FOREIGN PROPERTY IN THE FORM OF CORPORATE AND NON-CORPORATE EQUITY CAPITAL AND LAND

The first and most important point in this connection relates to an error in economic thinking that surfaces again and again in the mass of articles written by private and government experts on both sides.[2] The point is that the oil-exporting countries are not investing money, but real wealth, using money as a vehicle. This distinction is of the utmost importance. Without it, the investment problem is a banker's problem; with it, it suddenly becomes an economist's problem.

It will be pointed out later that investment in the so-called money markets, commonly (and, from the economist's point of view, erroneously) defined as the market of currency and all sight and short-term credit instruments (12 months or less) is at best a temporary vehicle—fraught with danger—that might be used by the oil-export-

[2] For one example, out of many, see P. T. Leach, "U.S. Urged to Stimulate Flow of Petrodollars," *The Journal of Commerce*, Oct. 16, 1974, p. 1.

ing countries to build up their investment capabilities. The long-term solution to the preservation of real wealth is real investment, not paper investment. The term "paper" applies to all currencies, including the U.S. dollar and Special Drawing Rights, as well as government bonds and nonconvertible corporate bonds.

The combined uncommitted oil revenues that will be generated in the Saudi Arabian Peninsula and in Iran will amount to about $54 billion per year. The last thing in the world the oil-exporting countries will do is to accept currency in payment. The Arab oil producers tried that once and lost $1.3 billion in the deal, due to the 1971 and 1973 dollar devaluations.[3] That was back in the days of low-priced energy, when the U.S. dollar was the universal standard of value.

A 20 percent dollar devaluation today, applied to only 1 year's uncommitted reserves, would cost Saudi Arabia alone more than $4 billion. The cost to Kuwait would be more than $1 billion; Iraq and Abu Dhabi would each lose about $800 million. Iran's losses would come out at close to $3 billion. Surely everybody, including the U.S. Government, must understand that the oil-importing countries will have to do better this time around than to tender money straight from the printing presses.

The preceding figures emphasize the importance for oil-exporting countries to achieve high turnover rates on their currency holdings. To retiterate, a 20 percent devaluation applied to 1 year's uncommitted reserves of Saudi Arabia will cost that country $4 billion. If Saudi Arabia could achieve a portfolio position with no more than 6 months of uncommitted reserves in currencies, the cost would be $2 billion. A 3-months' exposure would reduce that cost to $1 billion. Given the necessary priorities and a year or two of operating experience, Saudi Arabia, as well as other oil-exporting countries, should be able to reach a 3-month cash target.

In any event, there ought to be a cash target in the policy formulations of these countries, and that target ought to be communicated to oil-importing nations. This would facilitate long-term monetary planning on both sides and help to avoid disruptive crisis.

Devaluations are not the only risks of amassing foreign currencies. Another problem is the less spectacular but equally destructive erosion of purchasing power of foreign currencies through inflation.

For example, at press time, U.S. inflation was about 14 percent per year. The U.S. Government's assurances notwithstanding, it is accelerating. At 14 percent, this kind of erosion, applied to Saudi Arabia's uncommitted yearly reserves, will cost that country $3 billion—every year. That's more than Saudi Arabia's total oil revenues in 1972.[4]

This emphasizes even more dramatically the need to hold cash balances at an absolute minimum, because the inflation loss on accumulated cash holdings cannot be recouped. If, for example, Saudi Arabia could hold its cash requirements to 3 months of uncommitted reserves, the inflation cost would be reduced by 75 percent or $2.25 billion to about $750 million per year.

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[3] Merklein, H. A., "The Energy Crisis . . ." *World Oil*, op. cit., p. 42, and G. Corm, "Arab Capital Funds and Monetary Speculation," *Arab Oil and Gas*, Aug. 16, 1973, pp. 24–30.
[4] "Some Statistics From SAMA Reports for 1973," *Middle East Economic Survey*, p. (i).

Indexing the price of oil will protect the oil-exporting countries only against inflation losses on current or future transactions. It will provide no protection against past sales, where the proper protection is speed of investment and financial prudence.

For a non-U.S. owner to massively hold idle U.S. dollar balances in the United States in the form of money would be the poorest of all investments, since money (defined here as checking accounts and currency in circulation) yields no interest here.

As an alternative to money, credit may be used as a vehicle of investment. This may be an acceptable shortrun alternative, but since it shares many of the flaws of money, it is no more than that.

By credit is meant all interest-bearing instruments of all maturities, from sight to 20 or 30 years. Included are government bonds, corporate bonds and bank bonds, indexed or non-indexed, with or without a repurchase clause. Under this definition, for example, the Eurodollar market would be a credit market, and from the economist's point of view, quite properly so.

The U.S. Government has been busy trying to convince oil-exporting countries that they should switch to U.S. Government bonds if they don't like currency. And indeed, many of these countries, unable to quickly invest elsewhere and remembering the devaluation-induced losses on currency, are accumulating bonds. For example, on October 17, 1974, the U.S. Federal Reserve System, acting on behalf of an unnamed foreign government, bought some $450 million of Treasury bills.[5]

Actually, Treasury bills are about as poor an investment as currency. They are just as vulnerable to devaluation as currency and, since they are not indexed, to inflation. In fact, to the extent that a substantial portion of these bonds are nonmarketable, they cannot be dumped at times of stress and that makes them more vulnerable than currency.

Of course, Government bonds yield a return and U.S. checking accounts do not, so there is an incentive for bonds. Yet, at current inflation rates of 14 percent and interest rates on bonds, especially Government bonds, well below 14 percent, they yield a negative true rate of return.

There is another more fundamental problem associated with currency and bonds: If held abroad, U.S. dollars are a liability to the U.S. economy, as are bonds. The only difference is that one yields a return and the other doesn't. Both are made available to the foreign investor by printing numbers on pieces of paper. They are, in effect, extremely cheap substitutes for real wealth. Because oil-exporting countries are concerned with preserving their real wealth, they cannot afford to accept paper wealth. They must eventually and predominately invest in real foreign property—corporate or noncorporate equity capital and land.

Equity capital is not as vulnerable to inflation as are bonds, and that is its main attractiveness. What's more, appropriate monitoring of international money markets and balance-of-payments positions throughout the world, coupled with prudent and selective equity in-

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[5] "Money Market Gets Big Influx of Petrodollars," *The Wall Street Journal*, Oct. 18, 1974, p. 21.

vestment strategies, will keep international monetary crises at a minimum. This will do much to prevent unexpected devaluations, that other risk—besides inflation—that currency and bond holdings are exposed to.

Equity holdings exhibit characteristics all their own, especially if held by foreigners. The greatest risk here is nationalization or de-facto nationalization, that is, the freezing of repatriated profits. The latter policy, less overt but just as effective, leaves foreign capital nominally in the hands of the owner. That makes it less objectionable in world opinion.

Interestingly enough, the oil-exporting countries have a lot to learn in managing equity capital they hold abroad. The first and most important consideration is that industrial nations did not get where they are now by playing games or by being idealistic promoters of wealth throughout the world. They got there by shrewd economic analysis, by hard work, by a willingness to take risks and by a strict adherence to rules of the market. In short, they got where they are now by being capitalists.

THE OIL EXPORTING NATIONS HAVE JOINED THE RANKS OF THE CAPITALISTS

Oddly enough, the oil-exporting nations have now joined the ranks of capitalists, defined here as "owners of capital," and not in its later and distorted ideological sense. The only way to preserve that capital is by playing the game by capitalist rules. Indeed, most oil-producing nations are doing just that, from necessity, not from ideologic conviction, except that terminology used is often very much a-capitalistic, even anticapitalistic, sometimes downright Marxist. Still, nationalization, if applied against you, is objectionable, and it s a risk that the oil-exporting countries have to learn to guard against.

There are obviously nationalization-prone countries in the world, some expressly, others implicity, so. And then there are, just as obviously, havens from nationalization. Between these two poles, with countries like Peru on the one side, and Germany or the United States on the other, lies a continuum of governmental attitudes that has to be researched, defined and anayzed.

Clearly, capital will preferably flow to places where it has enjoyed traditional safety: Europe, North America, Japan (although that's a hard country to penetrate) and Brazil, to name a few. But even among the safe countries, there are many differences making for better or worse investment.

The internal inflation rate, for example, in addition to being a wealth-destroyer, is an indicator of a government's economic compentence. Labor problems, to give another example, can positively wreck an economy, as they are doing in the United Kingdom. This alone, coupled with heavy nationalizations of domestic capital, pretty well marks Great Britain as the poorest place to invest among any of the Western European countries. Yet, it has been and it remains a primary target for Middle Eastern investment dollars, perhaps because of historical hangups.

Among the most difficult problems relating to international investments, and especially to non-liquid equity investments, are those

where domestic legislation conflicts with the foreign investor's legislation. For example, a French subsidiary of a U.S. firm once received a sizable order for machinery to be exported to Mainland China. That was at a time when the United States and China did not maintain trade relations. Thus, delivery on that order was clearly contrary to U.S. law. But it was not contrary to French law, and a lot of French jobs were at stake at the time.

The case went through the courts, French courts of course, and the company was ordered to start production. The American executive involved in that case showed a great deal of personal diplomacy, and the problem was eventually resolved to everybody's satisfaction—with machinery being delivered by a U.S. firm to a then declared enemy of the United States. This problem may easily arise for an Arab subtidiary located in the United States and involving the sale of equipment to, say Israel.

Beyond the primary ideological conflict of interest, there are others. For example, the U.S. Congress recently overruled a presidential veto and thereby provided that railroad workers employed by private U.S. concerns be given retirement pay out of U.S. tax revenues. If Arab capital were heavily invested in the U.S. trucking industry, it would probably consider the railroad subsidy unfair. Yet there would be little the foreign owners could do about it. Indeed, the danger exists that those industries that are in foreign hands will be consistently denied subsidies for their U.S. workers, while similar subsidies are given to other industries. This kind of discrimination is best prevented by spreading investments over many industries.

Many more examples of discriminatory U.S. policies could be cited such as the subsidizing of strikes in the United States, by making strikers eligible for the food stamp program. On this issue, OPEC investors and U.S. capitalists may come to experience a mutuality of interests, and they may form a common front against U.S. labor unions.

Discriminatory bias of the type has also been experienced by many U.S. companies operating abroad. For example, in many instances these companies have been ordered to submit to union rules that did not apply elsewhere, or to grant fringe benefits that were not available to resident workers outside the U.S. firms. When these tactics are applied, the foreign corporation can do nothing else but to accept them. Again, it would behoove a foreign investor to know in advance the countries where such policies are likely to be implemented. Countries that grossly abuse this power ought to be avoided.

Wise investment requires acquisition and analysis of good information. On that score, no country offers better opportunities than the United States, through its Securities and Exchange Commission (SEC). Periodic reports required by the SEC are available to the public and generally are more detailed accounts than the usual annual reports to the shareholders.

For example, the SEC 10-K report contains financial and corporate information on an annual basis. The 10-Q report serves a similar purpose, except that it is issued and available quarterly. Both reports contain unscheduled material events on corporate changes deemed of importance to the SEC. These reports and other information are available for a small reproduction fee. Computerized ratio analyses, disclosure publications and a wealth of other information can be used to

quickly spot a likely candidate for acquisition, in any desired industry and in any desired geographical location within the United States.

As always, availability of data is in direct proportion to a country's economic development, a fact that tends to mitigate against investment in developing countries.

It's a fact of life, Americans are getting uneasy about the prospects of large-scale OPEC equity investments in the United States. Multinational corporations with many joint ventures or 100 percent-owned subsidiaries all over the globe are fearful of becoming OPEC subsidiaries. For years they have failed to understand why foreign individuals or governments should not welcome them because, as they saw it, their injection of capital and technological know-how could not do anything but help the host countries. Yet, faced with a reverse injection of capital and an expanded capacity to develop know-how—through OPEC research funds, for example—they themselves are anything but elated at the prospect. They are, in fact, downright worried, and because they are worried, they are setting up defenses against takeovers.

On the other hand, OPEC members are as short on financial managers as they are long on petrodollars. To take over and to run a large U.S. corporation requires management experience and know-how specifically geared to the legal and political U.S. environment. A particular problem area, previously mentioned and wholly new to OPEC managers, is labor relations.

In the ultra-short run, OPEC countries may avail themselves of the services of trust departments of large banks. In fact, some of the countries are doing this now.[6] Eventually, as soon as specific U.S. expertise has been developed among OPEC managers, this arrangement will probably give way to establishment of OPEC-owned and administered investment and management corporations. To back up a crash training program of OPEC managers, the establishment of an Arab University in the U.S. (as well as one in Europe and on other continents), and limited to M.B.A.-type programs of the highest quality, ought to be considered. In a way, this would be the reverse of American Universities located outside the United States.

As mentioned previously, U.S. corporations are anything but anxious to be acquired by OPEC interests. Their defenses are manifold, including lobbying for foreign equity restrictions on corporate shares. Internally, and aided by fears of domestic raids, small corporations are increasingly going private where they are much less vulnerable.

Large corporations contract the services of specialists who analyze, on a day-to-day and hour-to-hour basis, stock market transactions on their corporate shares and who report instantly any unusual moves. These alarm signals then trigger carefully prearranged defense strategies including instant telephone calls to major shareholders, personal letters from corporate presidents to the remaining shareholders, delaying court actions on technical violations of SEC regulations and other measures.[7]

As time goes by, U.S. corporations will become more efficient in the fight for independent corporate existence. But there is always the one

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[6] Demaree, A. T., "Arab Wealth, as Seen Through Arab Eyes," *Fortune*, April 1974, pp. 108–190.

[7] "Company Executives Shore Up Defenses Against Take-Overs," *The Wall Street Journal*, Oct. 21, 1974, p. 1.

convincing counterargument, namely money. Given a sufficient incentive, shareholders will part with their corporate shares, but these will become more expensive. This aspect, by the way, was ignored in the previous article (See World Oil, November 1974, p. 95), mostly because the quantification of price increases in corporate shares is impossible to predict. Clearly, if this price increase had been incorporated, it would have turned out that uncommitted Middle Eastern petrodollars would take longer than 20 years to buy up the Fortune 500 corporations.

There is one thing that the American public, and most of all the American Government, must understand, and they will understand it, if they will only once look at the oil-wealth problem from the oil exporter's point of view: Given the vulnerability of currencies and bonds, equity holdings are the only acceptable long-term answer to the current wealth transfer to oil-exporting nations. If the equity route is denied to the oil exporters, and there are noises in Congress that it might be, then they have absolutely no alternative but to cut back oil production. This will provoke angry reactions, to be sure, in oil-importing countries who will fail to see, or prefer not to admit, that it was their own policies that drove the exporters to these extreme steps.

Money has been said to be a veil. Underlying money is barter, and from the oil exporter's point of view, that barter spells out "oil for machinery and plants and all sorts of productive equipment." It does not spell out, as it has to some extent in the past, "oil for paper." It is to be hoped, for the sake of both the oil exporters and importers, that the money veil does not blind the oil-importing nations to this fundamental truth.

Oil Pricing Policy Options From the Producers' Point of View—A Theoretical Approach

(By L. Donald Fixler and Robert L. Ferrar*)

Much of what is written about OPEC is from the consumers' point of view. Drs. Fixler and Ferrar feel that objectivity requires some analysis from the producers' standpoint. Here they conclude that OPEC's economic self-interest will be enhanced by a united pricing and output policy coupled with price discrimination. They reach this conclusion after examining eight possible policy options involving the questions of limited versus unlimited reserves, short-term versus long-term considerations and static versus dynamic analysis.

OPEC (The Organization of Petroleum Exporting Countries) was organized in 1960 as a producers' cartel [1] consisting primarily of Middle East nations. With the two price agreements of 1971,[2] it began to exercise market power by administering prices. This power became fully recognized by the Western World as a result of the oil crisis beginning in 1973.

In this article we apply economic theory to Middle East oil pricing and output policies, with emphasis placed on the most desirable results from the point of view of the producing nations. Eight possible policy options are analyzed, involving the questions of:

—Limited versus unlimited reserves;
—Short-term versus long-term considerations;
—Static versus dynamic analysis.

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[1] Perfect cartelization requires that production be allocated among producing units according to marginal costs. (Those producing units with lower marginal costs produce larger shares.) That this is not likely at the present stage of Middle East oil cartel development is obvious. At present OPEC does little more than set prices, the 1973 production cutbacks notwithstanding. When the present political emergency has been ameliorated it is likely that OPEC will go back to price fixing alone. Under these circumstances full cartel profit maximization cannot be achieved. With price setting alone, each producing unit determines the quantity of output and the equality of marginal costs is not achieved. Nevertheless, cartelization is infinitely superior for the oil producing nations to precartel arrangements. Given that output cannot be effectively apportioned among the producing nations the next best solution is to produce that total output at which the sum of the actual marginal costs for the output being produced by each nation is equated to the industry marginal revenue. Since the cost levels involved in the above procedure for any desired output will be greater than the optimum, the sum of marginal costs will be equal to industry marginal revenue at a less than optimal output. Profits will fall short of the maximum for two reasons: (1) Costs for any particular output will be higher, and (2) total revenues will be less than optimal. If OPEC can adjust prices so as to achieve their "second best," total profits though less than optimal will increase and a greater share will be available to each member nation.

[2] See the OPEC Tripoli-Tehran 1971 Agreements of Posted Prices, Cairo, The League of Arab States.

Source: *Energy Policy*, vol. 3, June 1975.

World Energy and Effective Middle East Oil Markets

Option 1 Unlimited Reserves

Two assumptions are made here: first, that demand for Middle East oil is fixed; and second that the supply is more than sufficient to satisfy the demand.

The effective Middle East oil market is the relevant market for a price increase, while the world energy market becomes relevant with a price decrease. In the short term buyers in the first market have no alternative source of supply, therefore a price increase will result in little, if any, decrease in the quantity of Middle East oil purchased. Thus producers as well as oil companies will enjoy increased revenues. On the other hand, while a decrease in price will bring about no appreciable increase in sales in the effective market (thus bringing about a decline in revenues), it will enable producers to penetrate the world energy market in which alternative energy sources are available. In this market reduced prices should generate significant increases in sales and revenues.

Middle East oil producers are faced with a reflexively-kinked demand curve in which the upper portion is highly inelastic while the lower portion is highly elastic.

In evaluating all static options two elements are considered—revenues and time. Assuming nondiscriminatory pricing policy the benefits of higher revenues from an increased price must be weighed against the opportunity cost of increased revenue that would have resulted from a lower price in the world energy market. Without empirical studies the effects of price changes on total revenue cannot be determined. From the evidence of the 1973 price increases it is clear that demand is inelastic. In the short term, it is in the self-interest of the Middle East producers to raise prices. However, higher prices may shorten the short-term period.

The time period of the short term is a function of the level of prices. By raising prices the Middle East producers increase economic incentives for the development of oil and energy substitutes. This will lessen the time of the short term in which the demand for Middle East oil remains stable, effective and inelastic. In the long term, the Middle East producers are no longer the sole source of supply and therefore cannot control the market. Oil in general—and Middle East oil in particular—becomes one among many sources of energy. In the static options, however, there is no definitive demand for Middle East oil in the long term.

No specific evaluation concerning the direction of pricing policy in terms of Middle East self-interest can be made. The benefits of a price increase must be weighed against the opportunity costs of a price decrease and vice versa. These benefits and costs cannot be measured without data on demand elasticity in both the effective Middle East oil and the world energy markets. These data are not currently available.

A price increase will unquestionably raise short-term profits, but at the same time will reduce the duration of the short term. Thus, with unlimited reserves, it is impossible to determine whether total

profits will be greater by having higher prices for a shorter period of time or lower prices for a longer time.

Option 2 Limited Reserves

Here we assume that Middle East producers will sell all oil in excess of domestic needs before adequate substitutes are developed. Therefore, by increasing the price, these producers will be acting in their economic self-interest. Maintaining moderate prices may prolong the effective demand in the short term, while high prices will be an incentive in the search for alternatives, but these considerations are irrelevant when reserves are limited. A price increase is a justifiable economic policy in this option, since the short term alone is relevant for Middle East producers.

Other Markets

Option 3 Unlimited Reserves

The analysis of other markets with unlimited reserves is identical to option 1. The effect of changing prices on revenues is dependent upon the elasticity of demand. As in option 1, a definitive judgement cannot be made without appropriate data. A price increase may bring higher revenues for a shorter time, while a price decrease may bring higher or lower revenues for a longer time, depending upon the existence of a reflexively-kinked demand. The duration of the short term in other markets is also a function of the price level.

Option 4 Limited Reserves

Given liimted reserves. Middle East producers can sell their excess oil before the long term becomes relevant. In the absence of price discrimination, producers' profits cannot be maximized under these conditions. Since the different markets have separate demand curves, a single pricing policy will be ineffective. Price discrimination, that is the charging of different prices in separate markets, is the only justifiable policy.

DYNAMIC OPTIONS

World Energy and Effective Middle East Oil Markets

Option 5 Unlimited Reserves

The major factors causing upward shifts in demand are: first, the increased need for oil-related production as world income increases; and, second, changing tastes and technology which generate new uses for oil.

The major factor which may cause a downward shift in demand for oil is the development of alternative energy sources. In the static options, it was assumed that demand shifts abruptly from Middle East oil to other energy sources as they become available. In the dynamic options, the shifting process is gradual. Economists usually consider dynamic behavior more probable, but the dramatic events of late 1973 show the possibility of an abrupt change in the demand pattern.[3]

In the short term, demand increases as rising world income and technological advances dominate the oil and energy markets. In the

[3] The oil embargo coupled with dramatic price increases caused a good deal of unrest on the part of buyers with respect to an assured, moderately priced source of supply.

long term, demand decreases as substitute oil and energy sources are developed. These two forces operate simultaneously. The forces for expansion are initially stronger, therefore demand increases at a diminishing rate until there is an absolute decline as downward forces take over. The existence of unlimited reserves coupled with declining demand in the long term may result in unprofitable oil production. Also the prospect of increasing production costs cannot be ignored. It has been the experience of oil producers that as reserve pools diminish, extraction costs increase. This factor may also shorten the period of profitable operation.

Middle East producers should raise prices over time in response to increasing demand. In the long term, the slope of the demand function can change significantly. When adequate substitutes are developed and demand begins its downward path, there will be one world energy market. At this point there is no separate effective Middle East oil market. The demand faced by Middle East producers will be relatively elastic over its entire range.[4] The justifiable pricing option is best described by the theory of "monopoly with a limit price."

Assuming that the production costs of oil are lower than those of competing energy sources,[5] the oil producers will find that if they permit the price to go above a certain level they will encounter competition.[6] If they keep the price at or below this level—the limit price—they will be able to maintain a monopoly position in some markets.

As long as the limit price is high enough for the oil producers to cover their long-term average total costs plus some profit, they will probably find it to their advantage to do so rather than to raise this price, encourage competition and live with uncertainty. Given unlimited reserves, the long-term pricing policy should be to restrict entry of competitors while assuring some monopoly profit.

Option 6 Limited Reserves

With limited reserves, Middle East producers will be acting in their economic self-interest by short-term increases in price. Raising prices may still be a strong incentive for the development of substitutes, but this is irrelevant with limited reserves.

Pricing policy in option 6 is identical to option 2.

Other Markets

Option 7 Unlimited Reserves

Middle East producers will benefit from greater revenues in non-energy markets during the short term because of expanding demand and concomitant increasing prices. However, these high revenues must be considered vis-a-vis the opportunity costs of higher long-term revenues that would have resulted had price not risen sufficiently to obtain short-term profits. As usual, higher prices accelerate the development of substitutes and hasten the approach of the long-term. With unlimited reserves, the Middle East producers may diminish the

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[4] If one considers political factors, it may be possible for Middle East producers to be faced with the traditional kinked demand function as demand decreases in the long term. That is, with adequate substitutes a price increase will be met by shifting to alternative sources of supply. A priced decrease, however, may not generate more than proportionate increases in quantity sold as fear of political dependence may cause consumers to retain higher cost alternatives.

[5] See George W. Stocking, *Middle East Oil*, London, Penguin Press, 1971, pp. 416–433.

[6] The limit price associated with a producers' cartel may be different from the limit price associated with a joint producers'—distributors' cartel.

length of time they can profitable sell in these other markets by raising prices.[7] Without data, however, no specific pricing policy can be spelled out.

Option 8 Limited Reserves

Given limited reserves, increasing prices in response to the upward shifts in demand would be in the economic self-interest of Middle East oil producers. The Middle East countries would receive greater revenues from higher prices and expanding demand before the development of alternative resources leads to the long term with its downward-shifting demand. However, without price discrimination, profit maximisations is still not possible.

PRICE DISCRIMINATION

Having analyzed the eight options it is clear that there are a number of variables which must be carefully weighed in determining optimal pricing and output policy. One additional situation—price discrimination—must also be investigated. When two or more markets having separate demands can be distinguished, only price discriminations can maximise profits.

Price discrimination is defined as establishing price differences which are not proportional to cost differences when producing goods for separate markets. Where costs are the same, any price differences are discriminatory. In order for price discrimination to occur, three elements are necessary:

—Monopoly power must exist;

—Sub-markets must be distinguishable and separable;

—Sub-markets must have differing demand elasticities.

These requirements are met in the present case since:

—Monopoly power means simply the ability to exercise some control over price. This is clearly present under OPEC.

—There is both an energy and non-energy demand for oil. It is possible that the Other Market may itself be divisible into distinct submarkets. The problem of keeping these markets separate is one that remains to be solved.

—Differences in the degree of competition in the sub-markets are adequate proof that the demand elasticities differ.

Profit maximisation under this type of price discrimination—third degree discrimination—occurs when the quantities produced for each submarket are such that the marginal revenue in each submarket is equal, and equal to the marginal cost of the entire output. Since the demand elasticities and therefore the marginal revenues in each submarket are different separate prices will emerge when profit maximizing principles are followed.

Using price discrimination the Middle East oil producers may maintain a high price in the effective Middle East oil market where demand is inelastic, and lower prices in the world energy market and other markets where demand is relatively more elastic. They must, however, consider the effect of high prices on the development of alternative energy sources. It might perhaps be more politic in the short

[7] Political factors may also make the kinked demand function relevant in the long term in these other markets.

term and more economic in the long term to keep prices below profit-maximising levels in the effective Middle East oil market in order to delay pressures for replacing oil. Certainly this limit price policy should be followed to the extent that maximum long-term income be achieved when unlimited reserves are considered.

The problem then is how to prevent customers in the lower-priced market from becoming competitors in the higher-priced market. The only solution coming readily to mind is something akin to resale price maintenance agreements, which completely prohibit resale. These arrangements could be enforced by a threat of withdrawal of all oil or through liquidated damages.

The idea of price discrimination has already entered OPEC's thinking, although it is of a loss-inducing rather than a profit-increasing type. It is apparent in moves toward selling oil at reduced prices to developing nations, particularly African nations favorable to the Arab cause.

POLITICAL CONSIDERATIONS

Political stability is an essential ingredient for maintaining demand for Middle East oil. There is some feeling on the part of Western governments that OPEC's increasing role in Middle East oil control is indicative of less stability in sources of supply. OPEC nations must forcibly demonstrate that increasing détente in the Middle East will lead to political stability and economic responsibility. As long as industrial production depends on oil for its very existence, an assured source of supply is more important than price.

The main question is the course which the present state of détente among OPEC members will take. Lessening détente implies that each country considers its reserve from an independent nationalistic rather than a group point of view. The causality may run in either direction. Deteriorating détente will force countries to consider reserves individually. On the other hand, individual consideration of reserves will lead to a lessening of détente. The ultimate result will be an increase in bilateral bargaining rather than cartel pricing with the ultimate effect of reduced profits.

Third-degree price discrimination cannot occur in the absence of price agreements among OPEC members. A different type of price discrimination might occur. This type will take the form of clandestine price advantages to favored buyers who have more monopoly power. The effect is quite similar to that described in the reflexive kink analysis. As long as the secret nature of the lower prices can be maintained, the agreed price will prevail in most markets. This kind of pricing result is more likely to occur in the long term than in the short term. If in the short term a country can sell all it wants to at the agreed price there is no reason for it to cut the price. When substitute energy sources are found and the demand for oil decreases in the long term, clandestine price reductions will increase profits. It will pay the producer to sell the bulk of his output at the agreed price and the remainder at any price higher than marginal cost. As long as fixed costs are covered by primary sales at the agreed price, any additional sales at prices higher than marginal costs are profitable for the indi-

vidual producer. Clandestine price discrimination usually results in lower group profits since any oil sold at less than the agreed price is oil that cannot be sold at the agreed price.[8]

Regardless of the nature of reserves (limited or unlimited), the period of time (short term or long term), or the relationship of price to the development of alternative sources of supply; improving the level of détente makes possible a closer approach to optimal pricing and output policy.

If OPEC can improve its accord to the extent that production is apportioned along the lines of the theory of perfect cartelization, it can improve group profits. When production is appropriately divided, nations with lower marginal costs will produce relatively more output than their higher-cost partners. These production quotas may bear little relation to present market percentages. The primary problem which arises is the division of profits. It can no longer follow the lines of market shares. A new solution must be found.

It took a major political and military crisis to bring OPEC to the current level of détente. With the easing of these exogenous forces there is already some evidence of a lessening of their united front. Clearly it is in the economic self-interest of the OPEC nations to arrive at the full cartel solution accompanied by price discrimination in the long term. It will be much more difficult to achieve this ultimate goal in the absence of further political and military pressures.

It will have to be brought about by internal accords and a lessening of the current national chauvinism in favour of détente.

SUMMARY

We have analyzed eight possible policy options in terms of the economic self-interest of the Middle East oil-producing countries. The optimal policies and applicable economic theory for the eight alternatives can be summarized as follows:

(*a*) The unlimited-reserves options (1, 3, 5 and 7) require a cost-benefit analysis and empirical work before a final judgment in terms of optimal pricing policy is possible. Due to the already large reserves (in physical terms) and the constant addition to reserves from new discoveries of oil, it is more likely that reserves will be unlimited in all markets. In view of the above, OPEC nations should immediately undertake the econometric studies suggested in the body of this paper.

(*b*) The limited-reserves options (2, 4, 6 and 8) demonstrate that the benefit of increased revenues from higher prices outweighs the opportunity cost of lower prices. When reserves are limited a short-term policy of increasing prices should be followed.

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[8] For a complete description of clandestine price discrimination see L. Donald Fixler, "Price Discrimination in Homogeneous Oligopoly," *Antitrust Law and Economic Review*, Vol. 1, Spring 1966. Clandestine price discrimination best describes the distributors' behavior just prior to the formation of OPEC. The authors are suggesting that clandestine pricing may apply to producing countries given the political assumption of a lessening of détente in the Middle East. The most recent information provided by the Arab League is that posted prices are 140 percent of market prices. The market prices are not the posted price currently being disclosed. We feel this implies a resumption of bilateral relations and clandestine price discrimination.

The critical assumption made in this paper is that the speed of development of energy substitutes is a function of the price level of Middle East oil. If one assumes that substitutes will be developed before excess reserves are depleted, conclusion (a) applies. If one assumes that excess reserves will be depleted before adequate substitutes are developed, conclusion (b) applies. While it is impossible to determine which assumption best describes reality, a united pricing and output policy coupled with price discrimination will enhance the economic self-interest of Middle East oil producers under either assumption.

OPEC Can Wait—We Can't

(By Richard Moorsteen)

To view the oil crisis as an especially difficult problem in academic economics is to make yet again the mistakes so characteristic of that noble science. The critical elements of the problem are political-military, and overlooking them is a reckless as it is foolish.

WHAT'S WRONG WITH PETRODOLLARS?

In a recent article, for example, Hollis B. Chenery estimates that OPEC will have claims against the Organisation for Economic Co-operation and Development (OECD) countries of $285 billion by 1980, rising to $500 billion by 1985 and then tapering off in the 1900's.[1] This massive reshuffling of resources, he concludes, can probably be managed successfully by the world's "mounting a cooperative effort on the model of the post-war" Marshall Plan. He says, "In a very real sense, the position of the United States at that time corresponded to the position of the OPEC oil countries today."

This approach seems to overlook the fact that the Marshall Plan was carried out among countries with mutually supportive objectives. In fact, its vast resource transfer was undertaken precisely to further those objectives. In the present case, at least one OECD member, the United States, has policies and objectives very much at odds with those of the wealthiest OPEC members. Specifically, U.S. policies support Israel, whereas the Arab members of OPEC are committed to changes in Israel's status that will be opposed by the Israelis and, in some nonnegligible degree by the United States. At best some tugging and hauling is in the offing. More likely are periods of extreme tension, perhaps even war.

Will these tensions not interfere with OPEC's doing all that is needed for the world's "mounting a cooperative effort" of the required sort? Is it not equally likely, well before the halcyon 1990's, that the OECD will be a shambles as a result of Arab efforts to use their petrodollars for political-military leverage? In the last few months, with far less than the $285 billion that will be owed to OPEC in 1980, the PLO obtained permanent status in the United Nations, Israel was ousted from UNESCO, the PLO got full diplomatic status from the India of "peaceful" nuclear explosions, our EEC allies voted among themselves to oppose the U.S. petrodollar recycling scheme for fear of offending OPEC, and the British pound discovered how chilly things can get when a single day's nasty rumor from Saudi Arabia is con-

[1] Hollis B. Chenery, "Restructuring the World Economy," Foreign Affairs, January 1975, pp. 242–263. Chenery is a vice president of the World Bank.

Source: *Foreign Policy*, Spring 1975.

firmed by Exxon. All this occurred with hardly an overt Arab finger waved. If they were not convinced before, surely the Arabs must now believe that well-handled petrodollars can be a potent weapon. In fact, they may be both captive and victim of the discovery. For example, moderates who might once have argued the dangers of wielding the petrodollar weapon now stand mute, or at most argue for wielding it prudently.

Whether wielded with due prudence or recklessly, the petrodollar as a weapon is the reason it is unrealistic for us or the OECD to rely on decades of generous OPEC recycling to solve the world's financial problem. However great our need, the Arab States may decline to neutralize their most effective weapon while their own goals go unfulfilled.

This is also the reason that "hostages"—Arab investments in OECD countries that might be expropriated if OPEC misbehaves—offer no deus ex machina. The effective deployment of petrodollar weaponry would call for an Arab investment strategy with opposite consequences. OECD members are more likely to be at each other's throat, and at Arab knees, in seeking petrodollar inflows and avoiding petrodollar outflows, than they are to show the united front necessary to use "hostages" to their advantage. By sprinkling their funds among OECD members, using one member to conceal the true ownership of their investments from other members, offering to enrich one member by moves that ruin another, the Arab States can (no doubt already do) protect their funds. With the OECD thus divided, any single nation's expropriation of an Arab "hostage" is more likely to produce retaliation than repentance. The more probable consequence of Arab investments in OECD countries will be the birth of lobbies and special interest groups which use political influence with their countrymen and governments to smooth things over and avoid "confrontation" with their Arab patrons.

By this reasoning, even a relatively optimistic view of the money flows forecast by Chenery would expect to find the OECD members playing beggar-thy-neighbor with each other economically, while letting their alliance relationships tatter in consequence. In a word, they will be in a mess, with respect to both their finances and their national security. It is hardly likely that their domestic politics will flourish in this milieu. In these many ways, the present has an odor all too reminiscent of the late 1920's and 1930's.

WE NEED LOWER OIL PRICES—SOON

Even a few years of accumulating assets at the $50 billion annual rate Chenery sanguinely forecasts will give the Arab states an arsenal of petrodollars we are unequipped to cope with. What can be done?

A desperate prescription, the use of force, has been mentioned a few times by our President and Secretary of State. We may well come to this in the end. It would not be unusual in the Middle East for conflicting policies and misunderstandings to lead to war. But this is a failure not a solution. The consequences could be bloody and long-lasting. It would be little consolation if, as is likely, OPEC members suffered more than we.

If there is an alternative, it probably has its essence in the concept of "expectations." Commodity prices today reflect expectations about prices in the future. This is usually true for oil, because the world's current exploitable reserves are large relative to current production. OPEC is now producing about 20 percent below its capacity and new oil discoveries are occurring throughout the world. Countries already producing have the alternative of increasing output or holding reserves for future sale. If they believe the price will hold at current levels or climb further, it makes sense to sell with restraint. That supports today's prices and leaves oil to sell at high prices tomorrow. Since current oil prices are so high that even the poorest of OPEC members are accumulating foreign exchange faster than they can spend it,[2] there is little pressure to accelerate output—unless expectations about future prices should turn bearish.

If producers thought oil prices were going down soon, they would prefer selling more now rather than holding reserves to sell more cheaply later. Of course increased sales mean lower prices. The expectation would be self-fulfilling, so prices would indeed come down—soon. What spark might light this fire?

Any number of ideas have been suggested for solving our energy problem. Most of them, if they worked, could ultimately bring oil prices down: Becoming almost self-sufficient by 1985 through Project Independence; obtaining alternatives to oil through technological advance; cutting imports through energy conservation induced by gasoline taxes or oil tariffs; building a united front among oil-consuming nations to concert their policies; inducing OPEC members to cheat on their cartel colleagues by holding secret auctions now or offering them guaranteed purchase contracts for the future; pressuring OPEC members to cheat by legislating future discriminatory tariffs against high-priced sellers; and the like.

All these ideas have some merit, but they also all have credibility problems which cannot be quickly dispelled. This is a fatal defect if we need results soon—and we do. OPEC can afford to wait and see whether these solutions are politically viable or technically attainable. There are ample grounds for doubt on both scores. Meanwhile, oil prices remain high, output remains low, and OPEC amasses more and more petrodollars, increasing its staying power and our problems.

These ideas could be very helpful, however, if they were in support of an effective program that had little or no credibility problem. Even if the additional energy promised would not be available for 4 or 5 years, the assurance that energy prices would start downward 5 years hence should affect today's behavior for some OPEC members—those who will need funds to meet national needs 5, 10, and many years more into the future. For them, money from sales now will look better than reserves of oil held into the low-priced future. They can produce more; this expectation would give them the incentive to do so.

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[2] By International Monetary Fund statistics, as Chenery no doubt knows. Ecuador, among the poorest, which only began oil exports early in 1972, has since quintupled its central bank reserves (now about $300 million). Contrary to Chenery's assertions (p. 250). Nigeria cannot spend its current earnings and has increased its reserves tenfold in the same period (now over $4.5 billion) as has Indonesia (now holding over $2 billion). However poor they are, or great their needs, these countries simply lack the necessary plans and mechanisms for making good use of a sudden quadrupling of revenues.

A PROGRAM WE COULD ENACT NOW

If we could pass a law that OPEC members thought (a) would be carried out and (b) would almost surely bring a large increase in low-cost energy availabilities within, say, 5 years, we should be able to generate needed expectations about price. Our objective should be to prove to everyone's satisfaction that the world possesses more than enough usable sources of energy to meet its needs over the next decade or two (that is enough time for new technology and other means to solve our long-term energy problems).

What energy sources are usable for the interim? Good old fossil fuels seem the most promising. Geologically, we know that there are enough to last more than a decade or two. They are "usable" both in the sense that we have the requisite technologies and in the sense that the costs (as distinguished from the cartel-rigged prices) of producing them are well within our means.[3]

The aspect of "usability" that remains to be proved, therefore, is dealing with the OPEC cartel. The proposed line of attack would include the following activities: (1) Increase the number of countries able to export oil and coal by accelerating exploration and the development of production. (2) Accelerate the growth of oil and coal export capacities of non-OPEC countries already in the export business. (3) Increase the domestic coal and oil production capabilities of importing nations, without environmental detriment. (4) Increase our ability to use coal, oil, or natural gas for power generation, without environmental detriment.

This is basically an internationalist program though with major domestic components. It aims to restore competition among oil exporters by bringing new nations into the business, by expanding existing non-OPEC export capacities, and by showing exporters that we can (if pushed) do with less of their products through increasing coal use, all within environmental standards acceptable to us. Nations newly able to export may or may not join OPEC. But if they do, the cohesion of the cartel will be impaired through the increased disparity of goals among a larger, more heterogeneous group of countries and, more importantly, because new members, unlike the old, will not possess the glut of foreign exchange that permits OPEC to restrain sales. Other new exporters may hestitate to join OPEC at all, to avoid "confrontation" with us (if we show real teeth; this is where the proffer of guaranteed future purchases or the threat of discriminatory future tariffs could be important). An internationalist approach is consistent with the economic liberalism we would like practiced by other nations. It would also have the advantage for us of placing more offshore oil platforms in locations other than our shores, more strip mines in locations other than our Western States. Whatever the program's immediate impact, it offers the best chance of adequate supplies of low-cost energy at an early date.

Are there realistic prospects for making all these activities happen? The answer is that they are all happening now, spurred by high returns to producers, and public pressures for environmental preservation.

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[3] Outside the Persian Gulf, production costs in large known fields run as low as $1–$2 per barrel, as opposed to OPEC determined prices of $10 and up. From what is known of the world's geology, there are probably 20–30 non-OPEC nations with probable but as yet unproved reserves large enough and economical enough to merit developing petroleum technology.

But they are not happening fast enough to avoid the fearsome projected overhang of petro-dollars.[4]

There are several reasons why things are not moving faster. One is the uncertainty surrounding investment in these activities. Persian Gulf oil prices might drop again, or our Government might waver and rewaver in its energy policies, as it has done up to now. Investments could be lost that way, and the remarkable thing is that so much is being undertaken in spite of the risks. Another reason is the magnitude of the capital requirements. In 1974, for example, worldwide investments for exploring and developing additional oil and gas production may have reached $10–$12 billion (excluding funds to buy offshore leases in the United States). The industry, not without some quiet encouragement, has dragged its feet in environmental protection, but the technology for removing sulfur or ash from thermal power-plant emissions is in economic operation here and abroad. A 2–3 percent surcharge on strip-mined coal could provide $3,000–$4,000 an acre in regions worth mining, more than enough to reclaim the land. And there are bottlenecks—shortages of drilling rigs, well casements, et cetera. In time, the market would eliminate these, but time is short. In time, market forces could have produced the Liberty ships for World War II, but waiting on the market might have dragged the war into the 1950's—or reversed its outcome.

The role of Government, therefore, is to reduce investment risks by sharing (not shouldering) them, to increase capital availabilities, to enforce and subsidize environmental protection, and to break bottlenecks. This would accelerate what is happening anyway. It can be mandated promptly and persuasively by appropriate legislation. Its costs can be contained by making it a short (say, 4- to 5-year) crash program, so that we do not establish a pattern of perpetual subsidization as we did with agriculture in World War II. It could be financed by revenues from gradually rising gasoline taxes and suitable tariffs on oil imports—say, discriminatory against exporters charging excessive prices. Such levies would promote conservation at home, and their gradual rise could be designed to cushion their impact and match the ability of the industry to make use of the increased investment flows. We could undertake it unilaterally, but more effectively if other countries followed suit. We should urge them to do so.

How much should it cost? This must be determined annually, in accord with congressional procedures and as prior year results are appraised. As a rough baseline, we might think about doubling what is currently being invested to increase worldwide oil and gas production. It would take time to get there. At its peak, the cost would equal, say, a 10–12 cent tax per gallon on auto gasoline. A program that size would cost about a sixth or a seventh of what we pay *additionally*, each year since 1973, due to OPEC price hikes.

CAN OUR GOVERNMENT COPE?

Judging by past performance, the prospects look somewhat bleak. President Nixon was in office less than a year when David Rockefeller, John J. McCloy, and Robert Anderson called on him to point out that

[4] See "How Can the World Afford OPEC Oil?" by Farmanfarmaian, et al., Foreign Affairs, January 1975.

our Israel policy could endanger our oil investments. Then, in 1969, only 2 percent of U.S. petroleum consumption came from Arab sources. With an ineptness we have only begun to recognize as customary, we left our Israel policy unchanged but rapidly increased our dependence on Arab oil. By the eve of the 1973 war, over 10 percent of our consumption came from Arab sources, an increase of about 1.3 million barrels per day. Meanwhile, petroleum exports by Iran, Indonesia, and Nigeria to non-U.S. destinations had increased almost 6 million barrels a day. Had we bought less than a third of those additional exports, we could have been using no Arab oil at all by Yom Kippur 1973. Instead, we virtually forced the oil weapon into the Arabs' hands. From having the power to deprive oil companies of their investment, they came into the power to face us with all-around disaster.

We should try to do better. It may seem quixotic to suggest a one-nation legislative program that has so little in common with the odd mixture of wistful hope for consumer nation unity joined to the misguided fortress America propensities revealed so far by the executive branch. However, our Constitution says the Congress is supposed to legislate and the executive to faithfully carry out the legislation. The new Congress and new administration leaders should give it a go. Legislation could be drafted giving general objectives along the lines suggested above, instructing the executive branch to return with a concrete program of implementation by a fixed date. Meanwhile, congressional staffs could compose their own program of specifics. With spadework on both sides, a legislative executive dialog just might produce a reasonable program.

Oil and the Future: Economic Consequences of the Energy Revolution

(By Neil H. Jacoby*)

In any examination of the world economy and its prospects, the "energy revolution" must occupy a prominent place. Energy is the prime mover of industrialized nations. It is essential to the economic progress of the developing countries. Crude oil now supplies about half of the world's energy; and it will continue to be a dominant source for the remainder of this century.

The energy revolution exploded early in 1974, after the Organization of Petroleum Exporting Countries (OPEC) cartelized 90 percent of the world's exported crude oil, quadrupled the price, and its Arab members put a temporary embargo on shipments to the United States. These shocking actions produced radical structural changes in the world economy—changes destined to continue far into the future.

When oil moved from about $3 to about $12 a barrel in the United States, natural gas prices in the uncontrolled intrastate market rose from about $0.45 to about $1.75 per MCF; steam coal shot up from about $7 to about $28 per ton; and prices of nuclear fuel mounted proportionately. Drastically higher energy prices caused a marked fall in consumption of energy in the OECD nations, whose governments augmented the decline by adopting conservation measures. Higher prices triggered a quest for new sources of energy. They generated the goal of energy independence by the United States.

Some of the deeper and longer term consequences of the energy revolution within the next decade are: (1) slower economic growth of the United States and OECD economies, and faster economic growth of the OPEC economies; (2) dampened growth of energy consumption, including oil, in the industrialized nations; (3) the renaissance of coal and the accelerated development of nuclear energy; (4) a shift of private U.S. energy investment from foreign to domestic locations.

Let us examine these things. And let us consider the probable future supply and price of OPEC oil, and the role of the multinational oil companies.[1]

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[1] These topics are treated in the author's recent book, Multinational Oil: A Study in Industrial Dynamics (New York: The Macmillan Company, 1974).

Source: *Journal of Energy and Development*, vol. 1, Autumn 1975.

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INTERNATIONAL CHANGES IN CAPITAL FORMATION AND ECONOMIC GROWTH RATES

One obvious economic consequence of the energy resolution will be a massive shift of capital from the major oil-importing nations to the OPEC countries. When the price of crude oil quadrupled, payments due to the OPEC countries from the rest of the world expanded by some $65 billions a year. Even after deducting expanded payments for the imports used to carry out their ambitious development plans, the OPEC members will have $40 to $50 billions a year of surplus funds to invest abroad.

Capital investment in the OPEC nations will rise greatly in coming years, and this will accelerate their economic growth. If Horace Greeley were alive today, he would surely say, "Go Middle East, young man." By the same token, capital formation, productivity gains, and economic growth of the OECD countries will be dampened. They will save less because they must pay more for high-priced energy, and this will depress their growth rates.

In the case of the United States, which has made energy independence a national goal, capital formation in the domestic energy industries must mount rapidly, if the goal of energy independence is to be achieved. Energy must absorb a larger part of available savings, leaving less to finance capital formation in other sectors of the economy. Energy prices will rise further when price controls on domestically produced oil and gas are removed, as they must be to provide adequate incentives to a widened search for domestic reserves. More of the real resources of the economy will be channeled into the provision of energy, leaving less for other purposes.

The probable shortage of domestic capital makes it desirable that the United States import capital from other countries, including the OPEC members. During the post-World War II era, the United States has been a prodigous exporter of capital. Direct investment abroad by American firms has reached a cumulative total of more than $100 billions. Now, an inflowing tide of investment by foreigners in the United States appears likely. The more rapid inflation of production costs in most foreign countries has made the United States a relatively attractive location for manufacturing operation. (Volkswagen finds it can make its celebrated "beetle" at lower cost in Pennsylvania than in Wolfsburg, Germany.) The climate for foreign investment by American multinational companies has deteriorated. And changes in U.S. tax laws, which formerly favored foreign investment, now tip the scale in favor of domestic investment. For all these reasons, an inflowing tide of foreign investment in the United States is likely. If it takes place, it will help to close the gap in capital supply, strengthen the United States balance of international payments, and hopefully restore the battered U.S. dollar to its pristine role of monetary leadership in the world.

DAMPENED GROWTH OF ENERGY CONSUMPTION

A second long term consequence of the energy revolution will be a decline in the rate of growth of energy consumption. World energy consumption rose at a compound annual rate of about 6 percent after

World War II. In the future much higher prices and conservation measures will probably reduce the expansion in global energy consumption to something like 4 percent a year.

The post-World War II expansion in the use of crude oil was very much faster than for energy in general, because of the rapid displacement of coal by crude oil in Western Europe and the Communist countries. Consumption of crude oil in the world outside the United States and Canada virtually exploded after World War II, maintaining a compound growth rate of 11 percent between 1948 and 1972. Growth in the United States and Canada was at a modest 4.5 percent rate.

One may expect the growth of oil consumption abroad to decline to the neighborhood of 6 to 7 percent a year, and in the United States to fall to around 3 percent a year. Such a decline assumes that the United States Congress will approve of legislation that leads to the goal of energy independence by 1985. It also assumes that the price of oil will remain high by historical standards, but not necessarily as high as it is now.

Slower growth of oil consumption will, of course, moderate the growth in demand for oil production and refining facilities. The long hectic boom in refinery, pipeline, tanker, and marketing facilities ended when the age of cheap energy passed into history.

CHANGES IN PATTERNS OF ENERGY CONSUMPTION

A third economic consequence of the energy revolution is the renaissance of coal and acceleration of nuclear energy.[2]

The European Economic Community expects a reduction in the role of oil from 65 to 42 percent of its energy consumption by 1985, a rise from 9 to 15 percent in nuclear energy, and a rise from 17 to 24 percent in natural gas—which has lagged in European usage. In the United States we may expect similar shifts in the pattern of energy use, except for natural gas. Dwindling reserves, resulting from incredibly inept regulation by the Federal Power Commission, will unfortunately inhibit natural gas from expanding its role in the American economy during the next decade. Instead, domestic oil resources in Alaska and the Outer Continental Shelves will be tapped, and coal and nuclear fuels will come into wider use.

Expansion of coal production raises issues of worker health and safety in the case of deep mining, and of environmental preservation in the case of strip mining. Much of our coal contains an unacceptably high sulfur content that we do not yet know how to remove at reasonable cost. And, despite heavy mechanization of mines, the productivity of miners has dropped alarmingly during recent years for reasons not fully understood.

Expansion of nuclear power also confronts problems. One is to find socially acceptable sites with adequate cooling water. Another is fear of nuclear accidents. This fear is based on ignorance, because the probability of being injured by a nuclear accident is much less than that of being killed by a falling meteor! Safe disposal of radioactive

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[2] Because shale oil, coal gasification and liquefaction, geothermal, solar and other new energy sources will not play an important role in U.S. energy supply before 1985, they are not considered herein.

wastes is also a concern. Hopefully, the proposal to establish a limited number of nuclear energy centers, in lieu of dispersed siting of nuclear reactors and fuel processing plants, will be adopted. Once the siting deadlock is broken, nuclear energy should move toward an important position in the U.S. energy spectrum. The nuclear industry, including uranium mines, fuel refiners and reprocessors, and makers of reactors and power equipment, will have booming markets.

THE SHIFT FROM FOREIGN TO DOMESTIC ENERGY INVESTMENT

The national goal of energy independence implies a massive shift in U.S. energy investment from foreign to domestic locations. We have noted factors bringing about this shift. Already, multinational oil companies are curbing foreign exploration and development budgets. They are seeking to expand their domestic activities.

It is vitally important, however, that Congress act soon to strengthen incentives to domestic investment in oil and gas exploration, and to the development of other fuels. Unless Congress improves the climate for energy investment, energy companies will diversify their operations into nonenergy industries. Is this not the moral to be drawn from Mobil's investment in Marcor, from Standard of California's investment in Amax, and from Gulf's flirtation with Rockwell International?

The first essential step is to remove price ceilings on domestically produced oil and gas. The present ceilings not only deter investment in exploration and secondary recovery, they lead to excessive consumption of these nonrenewable fuels by keeping prices artificially low. Producers should be required to invest profits resulting from such removal in energy development. A second necessary action is to establish terms for leasing the outer continental shelves for exploration.

THE FUTURE SUPPLY AND PRICE OF OPEC OIL

We may assume that the energy revolution is here to stay. The United States will not return to $3 oil, $7 coal, and 20-cent natural gas. Nevertheless, a recession in the prices of energy from their present high levels is very desirable, and some reductions have already been made. Despite deep cutbacks in oil production during the past year, the OPEC has not been able to prevent a flooded world oil market and some price trimming. Libya and Abu Dhabi have eliminated the premiums formerly charged for low-sulfur oil. Algeria has concealed price cuts in barter transactions. And, as the Shah of Iran pointed out in a recent television interview, price inflation in the industrialized nations has already reduced the real purchasing power of OPEC's oil by more than 20 percent during the year and a half that has elapsed since the January 1974 increase. He has called for a price increase as an "economic necessity."

Because the OPEC is now conducting a publicity campaign to prepare Americans for another price increase, it is timely to state some facts. Although price inflation started in the United States and oil prices lagged the indexes for many years, OPEC cannot justify its Persian Gulf price of $10.25 per barrel on the grounds of inflation.

A barrel of OPEC oil would command today the same purchasing power of American commodities at wholesale that it had in 1947, if it were priced at $4.88 per barrel—less than half the present price. Nor can OPEC argue that it costs $10.25 per barrel to develop alternative sources of oil. The evidence is that they can be developed for around $8 per barrel. Finally, we should reject OPEC's contention that a rise in the U.S. import tax will cause the OPEC to raise its price and will justify that action. OPEC's past pricing actions were taken in its own interests and without consultation with the United States, and so will be its future actions. The effects of an OPEC price hike and a U.S. import tax are quite different. When the OPEC raises the price of oil, U.S. resources flow abroad; when the United States increases the import tax, those resources stay at home to finance American needs.

Will the OPEC cartel hold together? If it does, what price of oil will serve its long-run self-interest?

Skeptics about OPEC's durability point to the negative history of international commodity cartels—in tin, copper, rubber, sugar, nitrates, and other commodities. Sooner or later, these cartels have been beset by defections of their members, by rising external competition, or by technological displacement. They have broken up after relatively short lives. Skeptics argue that the same growing pluralism of interests that eroded the ability of the multinational oil companies to bargain collectively with the OPEC governments during the 1960's will probably erode OPEC cohesion during the 1970's. They believe that OPEC's power will diminish with the marketing of oil from Alaska, the continental shelves, and the North Sea.

Although these arguments have weight, it is conservative to assume that the OPEC will maintain sufficient cohesion to dominate world oil pricing over the next 5 to 10 years. Its members have savored the sweet taste of financial success from their collaboration. Five to 10 years must elapse before substantial competing sources of petroleum or other fuels outside of OPEC's control can become available.

Assuming that the OPEC continues to be an operational entity, what price of oil is in its long-run self-interest? OPEC confronts the classic dilemma of the monopolist: whether to charge a high price and thereby to accelerate the introduction of new fuel sources; or to charge a lower price and thereby delay the entry of new competition. Hollis Chenery of the World Bank has argued plausibly that the current OPEC price is well above the costs of major alternative energy sources, and will lead the OECD countries quickly to develop alternative sources and to reduce imports of OPEC oil. The OPEC members would realize larger revenues in the long run, he concludes, by reducing their price to around $8 per barrel and selling more oil than by holding the price at $12 per barrel and selling less oil.[3]

Nevertheless, political and psychological as well as economic factors will determine the OPEC's pricing and production decisions. What conditions would lead the OPEC to minimize the price of its oil—either by achieving a reduction or reducing a future increase? I suggest that the necessary conditions are three: the ending of rapid price

[3] Hollis B. Chenery, "Restructuring the World Economy," Foreign Affairs, January 1975.

inflation, a settlement of the Middle East conflict, and strong action by the United States to move toward energy independence.

The OPEC will not lower the price of oil until the industrialized nations clearly have brought inflation under control; indeed, it will raise the price if two-digit inflation continues. This is another compelling reason—if any other were needed—to bring world-wide price inflation to an end.

A durable settlement of the Arab-Israeli conflict is another prerequisite to a minimum price for OPEC oil. It was resentment of United States support of Israel that led the Arab members of OPEC to support high-priced oil and to put a temporary embargo on oil shipments to the United States. They are unlikely to exert their considerable influence in the OPEC in favor of a moderate price policy until there is durable peace int he Middle East. The broad terms of a mutually satisfactory settlement, which must be guaranteed by the Soviet Union as well as by the United States, are clear enough. Soviet cooperation probably can be gained by a United States commitment to provide the U.S.S.R. with the developmental assistance it urgently desires in order to strengthen itself against the threat it perceives from mainland China. What is now needed is pressure by the two superpowers upon their client states to move steadily toward an agreement.

The third major precondition to a minimum OPEC price is visible movement by the United States toward the goal of energy independence. For a year and a half, Congress has been floundering in a sea of indecision, while United States dependence upon OPEC oil has risen day-by-day. The passage of a national energy policy has put the American political system to a crucial test. Will Congress have the wisdom and political fortitude to impose higher domestic energy prices in the short run in order to free the United States from the threat of energy pressure upon its foreign policies and, probably, to benefit from lower energy prices in the long run? That has been the basic issue raised by President Ford's energy program. Needless to say, OPEC's managers are impressed by actions and not by rhetoric.

If the United States, and the other OECD nations, act promptly to satisfy these three conditions, they will increase the probability of averting OPEC increases and may even achieve price reductions.

AN INTERNATIONAL COMMODITY AGREEMENT ON OIL

By what process should strategic oil pricing and production decisions be made in the future? Certainly, decisions concerning so vital a commodity as oil should not be left to the unilateral determination of a cartel of small oil-exporting countries. The present system is unstable because it serves only producer interests. It denies weight to consumer interests.

A practical arrangement would be to make the supply and price of oil the subject of an international commodity agreement. Such an agreement might be negotiated by the OECD and the OPEC countries under the aegis of the International Energy Agency. It would fix for several years in advance a price range for crude oil and a range of production levels that the OPEC would agree to maintain. Oil prices

could be adjusted according to an index of world wholesale prices. The oil-importing countries could pledge technical aid in economic development and opportunities for investment of surplus OPEC oil revenues.

Such an international commodity agreement would not supplant markets. It would specify only an agreed range of prices. Competition among oil companies would continue to allocate petroleum supplies and to determine transaction prices. The concept of an international commodity agreement on oil was advanced as long ago as 1963 by Sheikh Abdullah Tariki of Saudi Arabia. It is an idea whose time has come.

THE FUTURE ROLE OF MULTINATIONAL OIL COMPANIES

Finally, let us consider the future of the multinational oil companies. My study of the structure and behavior of the foreign oil industry after World War II revealed an increasingly competitive industry. By every economic test, market competition among multinational oil companies served the world's consumers of petroleum products well. For this reason, they should—and I believe they will—play an important role in oil's future.

Ultimately, the OPEC members probably will nationalize all foreign-owned crude oil reserves and production assets. Even so, this would involve less than one-quarter of the gross fixed investment of the foreign oil industry—$32 billions out of $134 billions. More than three-quarters of the industry's investment is in pipelines, tankers, refineries, chemical plants and marketing facilities lying outside of the control of the OPEC members.

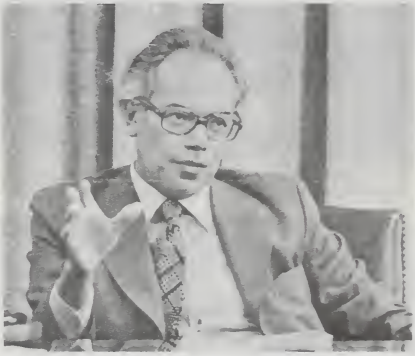
For many years, the OPEC members will need the expertise of the multinational oil companies in refining, transporting and marketing crude oil and petroleum products. They will need the technological talents of the multinational companies in exploring for and developing their oil resources. The companies will probably operate with "service contracts." These provide that any oil that is found shall be divided in agreed proportions between the Government and the company. Such contracts have been made in Libya, carrying an 81–19 percent split of the oil. Other service contracts have been made in Bolivia, Venezuela, Peru, and Saudi Arabia. Under such arrangements, the companies have no title to foreign petroleum resources. They are simply paid for their services with oil that they can take away, without paying taxes, royalties, or prices to the Government of the producing country. If the provisions of such "service contracts" are honored by the producing countries, they can provide a basis for profitable multinational oil operations. To conclude: the multinational oil companies do have a future, not only in world oil operations but also as agents for the OPEC countries in their drive for technological development and industrial progress.

U. S. News & World Report

LATEST OIL HIKE: "ONE MORE STEP ON THE ROAD TO DISASTER"

Interview With C. G. Bluhdorn, Chairman, Gulf & Western Industries, Inc.

"Greatest challenge since World War II," says Mr. Bluhdorn of actions by the OPEC oil cartel. How can the U.S. fight back? He outlines a plan of action in this interview with editors of *U.S. News & World Report.*



Charles G. Bluhdorn, 49, heads a diversified corporation producing automotive parts, components for petrochemical plants, paper, sugar, tobacco and motion pictures. Since the embargo of 1973-74, he has made exhaustive studies of the world oil cartel, its practices and policies.

Q Mr. Bluhdorn, the oil cartel has just increased the price of petroleum by 10 per cent. As an American businessman, do you think this country can live with these continuing increases in the cost of energy?

A I do not. I am absolutely flabbergasted by worldwide reaction to this increase. Some people are actually relieved. They thought that things could have been a lot worse!

These OPEC [Organization of Petroleum Exporting Countries] fellows are the greatest public-relations people I have ever seen. One starts out by saying he wants 35 per cent. Then another says that he doesn't want any increase, and even though he finally surrenders to the other, he ends up as a hero to the Western world. This is like a comic opera.

In the end a "statesmanlike" 10 per cent increase is proclaimed, which actually is the equivalent of a 40 per cent increase. All you have to do is take 10 per cent of the 400 per cent increase imposed two years ago and you have a total of 440 per cent.

Q What do you see as a consequence?

A This is just one more step on the road to disaster. It is another turn of the screw that has put not only the U.S. but the entire Western world in a vicious economic squeeze. We are confronted with the greatest challenge this country has faced since World War II.

These nations in the oil cartel are threatening the security of America. The Western Alliance is in total disarray. These are harsh words, but I am choosing them very carefully.

The Shah of Iran sits on his throne and pontificates about how we can't control inflation here in the U.S. The fact of the matter is that the prices of most other commodities have been coming down very rapidly during the past year, including even the price of the so-called mythical gold. At the cost of a tremendous recession, we have succeeded in bringing down the inflationary spiral which is now being reactivated by its OPEC originators.

Not long ago OPEC didn't want to take U.S. dollars any more because they felt our currency had gone to pot. Now that the dollar has strengthened, they shifted gears quickly and, momentarily at least, are willing to give the U.S. another chance. When has such hypocrisy ever been seen in our lifetime?

Obviously, this whole operation is assured of success as long as we're willing to underwrite it.

Q What do you mean by that?

A I mean that the U.S. and its allies are undercutting each other in their eagerness to deal with the Shah and the sheiks. We have given up any effort to escape this blackmail.

Does the Shah want atomic power plants? We race to fill the order. Does he want F-15s or F-16s or F-17s? We are here to serve. We can't wait to sell all these fellows our latest technology and equipment, even if it hasn't been supplied to our own armed forces.

It looks as though we have decided to make the Middle East a testing ground for our weaponry. And we're in competition with our Western allies on this score. Adolf Hitler would turn in his grave—with envy—if he knew about the weaponry and nuclear plants that we are building up over there.

What we're saying to the blackmailers is this: "Go ahead, rob our bank. Then we'll give you the weapons so that you can rob us a little more." This is really infamous!

Q What's to be done, in your view?

A For one thing, I think American businessmen should give some thought to what is happening. For my part, I don't want to make profits for Gulf & Western this way.

People say: "Well, power plants don't give them nuclear weapons." That's baloney. You saw what happened in India after they got an atomic power plant. They exploded a nuclear bomb and joined the atomic club of the world. We don't want to compete for that type of business, and we sure wouldn't pay a commission for it.

We have stopped sending our movies to Iran because they want to pay us the same price that we received 10

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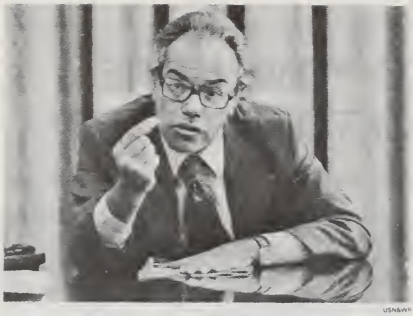

USN&WR

"OPEC blackmailers" in the Middle East "are threatening the security of America. The Western Alliance is in total disarray."

INTERVIEW ON THE OIL CARTEL

[continued from preceding page]

years ago. I am sick and tired of this double standard of continuously shortchanging the United States of America.

Q What do you see happening next?

A It is already happening. All the other nations in the world with commodities to sell are trying to figure out a similar scheme and how to make it work.

Nobody in Washington wants to admit what is going on. I've tried to discuss it with the President and with members of Congress. I must say that on this point the Secretary of the Treasury [William E. Simon] is in full accord with my point of view. I tried to warn Secretary [of State] Kissinger about this a long time ago, but nobody seems to care. It's the greatest *laissez faire* attitude I've ever seen in this country.

We are in an era of holdups—and the biggest Jesse James is the OPEC oil cartel.

Q Do you think the average American is worried about what you say is going on?

A No—because nobody has the guts to tell the people what is happening.

Unfortunately, there are a lot of people in this country who believe the whole thing was a plot by the oil companies to give them an excuse to push up the price of oil and increase their profits.

Our own Government has preferred to take the easy way instead of alerting the nation to the facts of life. Go ask any college student in the United States why we have high prices for oil today, and he will likely tell you that it is because the greedy oil companies have harvested a bumper crop of profits at the expense of American citizens who are suffering as a result of the ensuing inflation.

When I spoke out against OPEC at a meeting of The Conference Board, people all over the United States wrote me hundreds of letters saying: "It's about time." But I didn't see any other big businessmen speak out. You know why? Because they were so anxious to do business with all of these countries that are raking in our billions.

Q The OPEC nations said that $11 a barrel for oil was justified because it had been so low during the 1950s and 1960s when the cost of most other things was rising—

A Let us examine this situation. I am well aware that the OPEC blackmailers say that they are only getting a just and fair price. They also say that they are the first nations to use their income to help their less-fortunate brothers in the "third world."

Well, I think the time has come to remind the Shah and the sheiks of some recent history. Never in the history of mankind has there been a more-generous nation than the United States of America. The fact is that after World War II, we helped to rebuild the entire free world. Even our former enemies were given open-handed aid. Under various aid programs—including the Marshall Plan—we freely contributed both economic and military assistance in the amount of some 200 billion dollars, to which we might add 50 billion dollars of Lend-Lease during World War II.

Why doesn't somebody ask the members of the oil cartel where they would be today had it not been for the United States? There is no question in my mind where they would be. I believe we saved Iran from Communism—and all the Middle East for that matter.

American equipment and know-how developed the Mideast oil fields in the first place. We also provided substantial aid to those very countries that now claim they were exploited by us.

I have dug out some figures that you don't hear mentioned in these days when we seem to be apologizing to these blackmailers every time we turn around. Since World War II, we have supplied aid to Saudi Arabia of over 325 million dollars; to Libya, over 200 million; to Iraq, 100 million. Oh, yes, and almost 1 billion dollars to Egypt.

The OPEC countries as a whole—leaving aside Iran—have been helped out to the tune of 5 billion dollars in American aid since World War II.

I would like these oil producers in the Mideast to tell me what price per barrel they think Russia would pay them if they had come into the Soviet orbit.

The Shah of Iran would not be sitting on his plush throne today and lecturing us if it had not been for the support of the United States. Yet here he is, stating that the world is going to have to be restructured on new terms. His Government has received 3.3 billion dollars in aid from the U.S. since World War II. Now, when he comes to Washington, we roll out the red carpet. He generously offers to bail out Pan American Airways, then decides he won't go through with the deal. Even so, he gets a chorus of applause.

Ten years ago, if I had written a scenario like this, they would have put me in a padded cell. But here today, in 1975, it has become a true story.

"SAUDIS OUGHT TO FINANCE NEW YORK"—

Q According to official reports from such agencies as the World Bank, the OPEC countries don't have nearly as much money to spend as originally predicted. Do you agree?

A No, but nothing surprises me.

During the past year you could go into most offices in Washington and hear people say that $11 a barrel was not all that bad a price for oil. It is this permissiveness which gave impetus to this new 10 per cent increase.

As a matter of fact, the Algerian Oil Minister quoted one of our high American Government officials as having O.K.'d this price increase in advance. I can see what will happen now. They will purchase 10 per cent more military hardware, and then some theorists are going to predict that it won't be long before these cartel nations will actually be in the red.

This is a real "Catch-22" situation if I ever saw one. Dr Strangelove must be running the computers of those people who are optimistic about the flow of oil money.

The Shah is trying to outspend himself to go into the red, but even he will not be able to do it. The Saudis absolutely don't know what to do with it all. They are the ones who ought to finance the city of New York. That would be one way to get back part of the loot.

All I can add is that I know how to read a balance sheet, and I tell you that if present price levels for oil continue, there is absolutely no way to keep the Western world from going from debt to ever-deeper debt. I can also read history,

which tells me that this can't continue indefinitely without leading to total depression or war.

I refuse to live in this dream world in which people who should know better tell us that we can avoid disaster, and are willing to accept the fact that we are now being charged *100 times* the amount that it costs to bring this oil out of the ground in Saudi Arabia. This has got to be the biggest profit operation in the history of mankind.

We are told that the OPEC countries will handle their funds with a great sense of responsibility. As far as I can see, this huge accumulation of billions of dollars in tribute being paid by us constitutes the largest political slush fund ever accumulated by any one group in history. It is no secret that they are using the power of this money every day to enforce their political aims in the Middle East, and at the same time to assemble a massive military arsenal with our eager help and support. In other words, they are creating an enormous potential volcano that we, in effect, are faithfully constructing for them—and just because it hasn't erupted yet, we are all being lulled to sleep.

Q What do you recommend as a way out of this crisis?

A A long time ago I said that we had to demand a reduction in the price of oil rather than to accept an increase. When one considers the drop in the price of most other commodities, I can assure you that $5 and $5.50 a barrel is actually excessive under today's market conditions.

Now, I admit that $5 a barrel may not be enough to put an F-14 in every sheik's hangar, or to fill Swiss bank accounts to overflowing. But it is surely enough to meet the needs of the people in OPEC nations in adequate measure, if devoted to that purpose.

The difference between $5 and $11 for a barrel of oil is an outright subsidy provided by Western countries for the ultimate destruction of mankind.

Q But what should be done?

A What we should have said to the OPEC countries at the very beginning was something like this:

"Why not co-operate as part of the family of nations on this globe that modern science has made so small? Don't use oil as a political weapon. If $5 a barrel is not right, then let free supply and demand set the market price. The U.S. has sold gold at auction for sealed bids. Why don't you do the same thing with oil, and let us see where the price comes out?

"You have an opportunity to inject a new breath of confidence and spirit into the world. While a substantial reduction in the price of oil would not solve all the world's problems overnight, such a step would mark the beginning of a de-escalation in the price of all raw materials. Once you remove fear from the minds of people, restoration of confidence begins."

Q But what happens now, since the OPEC leaders have refused to charge less for oil?

A Before the October [1973] Middle East war, I pleaded that we should take measures to prevent the potential blackmail from destroying the economic health of the free world. In the past, I have made the following specific suggestions, which still apply today:

1. Let's get cracking on development of coal and nuclear power as alternative energy sources to OPEC oil. We have the coal—enough for hundreds of years and, in terms of energy content, more than OPEC has in oil. The country that unlocked the secret of atomic power through a Manhattan Project during World War II can certainly build nuclear power plants fast enough to end the hemorrhage we now suffer by paying for OPEC oil.

2. The people of this country have got to be told that they can't go on using energy as if there were no tomorrow. In December of 1973, in the middle of the oil embargo, I

Shah of Iran looks over a new jet. Whatever the Shah wants in weaponry, the U.S. "can't wait to sell," Mr. Bluhdorn asserts

Oil Ministers of OPEC. Says Mr. Bluhdorn: "We are in an era of holdups—and the biggest Jesse James is the OPEC oil cartel."

Oil refinery in the Middle East. "American equipment and know-how developed the oil fields in the first place."

INTERVIEW ON THE OIL CARTEL

[continued from preceding page]

said in a speech in Denver that the only thing we had to fear was the fear of the lifting of the embargo itself, because it was only during that period that we understood the true nature of the crisis. At that moment we should have been working around the clock to get moving with a 40 or 50 mile-per-gallon automobile.

As I look at things two years later, I wonder where has all this American incentive to succeed gone? If we cannot depend on Washington to lead the way, it should be the desire, the determination and the duty of American industry to lead the way in a futuramic conservation drive in every aspect of energy. Nowhere have I seen an enthusiastic attitude to win this battle in the old American fashion.

3. To get people out of the big cars, the Government should raise the price of gasoline at the pump and rebate on a fair method to lower-income families so that they do not suffer undue hardship. Along with this, let's slap a substantial horsepower tax on automobiles to remind everybody that this is no time for luxury.

4. We must launch a massive federal program to spur building of mass transportation on a scale never before envisioned anywhere in the world. We don't need new highways—they don't save gas. Mass transportation does. There should be sufficient incentives to make it so attractive to ride the bus or the subway or the commuter train that people will reduce usage of their private automobiles.

This program recognizes that America runs on wheels. But we must remember that the greater the load that is placed on those wheels, the heavier will be the eventual burden that we must inevitably pay on this country's balance of payments.

THE "GOLDEN OPPORTUNITY" FORD LOST—

Q You mention a Manhattan-type project for energy. Do you think the Energy Independence Authority proposed by President Ford, with 100 billion dollars to be spent over 10 years, would do the job?

A When President Ford became President of the United States under the most extraordinary circumstances in our nation's history, he had a 30-day period during which the entire country rallied behind him after the debacle of Watergate. He had even a greater following and more sympathy than was accorded President Johnson after the tragedy of November, 1963.

Timing is everything. Then and there was the one moment when the new President could have called on the American people to make any and all sacrifices. At that moment in time he could have pushed through a far-reaching conservation and domestic resource-development program. It would have been a wartime-like plea, and it would have met with a unified and massive response of unconditional grass-roots support by the American people. They were looking for leadership and restoration of confidence.

There is no doubt in my mind that the President lost that one golden moment of opportunity.

Now I believe it is difficult to get any major plan moving forward. However, I do agree that it is better to spend 100 or 200 billion dollars on developing our domestic energy reserves than to pump this money into places like Vietnam, as we did readily in the past, or into new military weapons going to the Middle East, as we are doing now. Any price and any program is worth paying for if it avoids the potential of blackmail or ultimate military confrontation and destruction.

I think the Government should give strong incentives to private enterprise to get on immediately with research and development. These incentives should not be to fatten the corporate coffers, but to get American ingenuity moving.

A divided Washington can only confuse business and will get us no place. However, I must say regretfully that, if all fails, then I am in favor of a Government-type agency that would get on with the job. Any day, I would rather have American bureaucracy as against OPEC blackmail.

USING ANTITRUST LAWS TO BREAK OPEC—

Q You have proposed a way of breaking the oil cartel through U.S. antitrust laws. Is this realistic?

A Don't take this suggestion lightly. It is high time the members of this international oil cartel were alerted to the fact that Americans are fed up with practices that are not only totally impermissible in our society, but threaten its very doom.

OPEC has covered itself in an offshore cellophane wrapper containing properties of the U.S. oil companies that it has expropriated. I say this wrapper could be pierced by our antitrust laws. The Sherman Act was passed in 1890 to curb such practices. The monopolies that existed then were mere child's play compared with the monopolistic power that is being wielded by OPEC. They have taken over American property and now proceed to defy the basic principle of supply and demand.

Q How would your plan to use the antitrust laws work?

A We have commissioned a legal study of the situation by two eminent national law firms. The result is a brief that explains how the Sherman Act can reach the illegal and conspiratorial commercial conduct of OPEC. This has been presented to U.S. Attorney General Edward H. Levi. In my letter to him on July 22, I stated:

"Respectfully I say that what it takes is for your Department to consider this most carefully and then to act with firmness and determination for the sake of our national interest. . . . How often has the course of history proved that when blackmail is freely paid, it invariably leads to more blackmail?"

I hope and pray that the Attorney General will give this matter all serious consideration.

Many people are dubious that the legal process will ever work. I say that our whole way of life and the viability of our free-enterprise system is under attack, and we must defend ourselves by all means at our disposal. We have to organize our own antiblackmail commando unit, and we have to start pricking away at the ever-growing OPEC balloon. I don't know which point of the needle will make that balloon finally burst, but it is clear that the more needles we stick into it, the better the chance for a quicker ending to this monstrosity.

There seems to be an almost-mythical obsession everywhere with the comings and goings of these OPEC fellows. Magazine covers and headlines of Western journals are fascinated with this billion-dollar game the sheiks are playing. Our stock markets go up or down to the whims of these blackmail artists. It is OPEC who rules the tape on Wall Street.

To me this is a national disgrace. How can we call ourselves a giant when we allow domestic squabbles to legitimatize this affront to our survival?

It is high noon in Washington and throughout our great and proud land. We must get on with the job—in the interests of ourselves, our children and future generations to come.

That is the only way we can stand tall as we enter our 200th year.

Energy Independence for America*

(By Mason Willrich)

The Arab oil embargo and the OPEC oil price explosion in 1973–74 exposed America's energy vulnerability and set off a national debate on how to regain energy independence. Should the United States reduce its vulnerability to interruptions of its oil supply by levying taxes or imposing import quotas? By increasing domestic energy supplies or reducing demand? By less or more Government control of domestic energy prices? By relying on private enterprise or launching new Government corporations?

The American energy debate seems endless. By October 1975, the tally on energy legislation for the 94th Congress showed about a thousand bills introduced and only a handful passed. Most of the hard choices are still ahead. The continuing indecision in the United States is partly due to the complexity of the subject, since energy plays a pervasive role in an industrial and consumer-oriented society. However, the Government's persistent inability to make political choices among alternative *means* may also reflect doubt and ambivalence about energy independence as a national *goal*.

Is this goal so compelling that the U.S. Government should make the painful political compromises necessary to achieve it? If the answer is no, it seems time for the Government to abandon the energy independence rhetoric and adjust to the reality of a substantial vulnerability to the interruption of American energy supplies from foreign sources. However, if the answer is yes, it is high time for the Government as a whole—Congress and the President share responsibility—to rise above political partisanship and narrow economic ideology in order to make the far-reaching decisions that will start America moving decisively and irreversibly toward energy independence.

In this article I will analyze the basic issues underlying energy independence from an American viewpoint. But the energy path America chooses, whether consciously or by default, will have major ramifications for international stability and security, the world economy and the global environment. I would hope that some of what I write here may stimulate open and constructive criticism of American energy policy, or the lack of one, from Western Europe. Such criticism is not only warranted by the large impact on other countries of future American patterns of energy production and consumption, but also is needed as an ingredient in American decision-making.

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AMERICA'S ENERGY POSITION

An evaluation of energy independence as a national goal for the United States must begin with the current American energy position. On the demand side, Americans constitute less than 6 percent of the world's population, but they account for more than 30 percent of the total world consumption of energy. The United States consumes twice as much energy per person as many industrial countries in Western Europe and 25–30 times as much energy per person as many less-developed countries in Africa, Asia and Latin America.

On the supply side, the United States is at present one of the world's largest oil producers, natural gas producers and coal producers. It is still richly endowed with fossil energy reources although it would not have been economical to develop much of this resource base before the world oil price increases in 1973–74. Moreover, the bulk of American fossil energy resources are in the form of coal, a solid that may be burned directly or converted into gaseous or liquid form for consumption. Finally, the United States has by far the world's largest operable nuclear power capacity, a position it is expected to maintain in the years ahead.

With regard to the trade in international energy, the United States is one of the world's largest coal exporters. It is also by far the largest supplier of nuclear power reactors and enrichment for uranium fuel. On top of this, five of the seven largest international oil companies—Exxon, Gulf, Mobil, SoCal and Texaco are American-owned and based.

Despite these strengths, there are two large vulnerabilities in the American energy position—natural gas and oil. The origins of the American natural gas supply problem are primarily domestic. The production of natural gas and the ratio of reserves to current production have been declining since the early 1970's. A nationwide shortage of about 15 percent of total demand is estimated for 1975, and the shortage is expected to increase in severity throughout the late 1970's at least.

It is not necessary here to attempt to evaluate the relative importance of the various factors contributing to the shortage—federal regulation of wellhead prices which artificially stimulates demand while reducing incentives to increase supplies; the exemption from federal regulation of gas sold in intra-state markets; the withholding of gas from the interstate market in an effort by gas producers to bring about Federal price deregulation; the increased demands for natural gas created by environmental restrictions on other fuels; and, finally, the approach of resource exhaustion. The important point for our purposes is that oil is the most readily available and environmentally acceptable (though not as cheap as coal) substitute for natural gas as fuel for boilers. The American natural gas shortage compounds its oil supply vulnerability.

The United States is today the world's largest importer of crude oil and petroleum products. In fact, it is at present importing substantially more oil than Japan—a country which has the third largest gross national product, a population half the size of the United States, no significant oil resources of its own, and no potential for energy self-sufficiency.

During 1975 the United States imported more than 6 million barrels of oil a day, or more than 35 percent of its current oil requirements.

The immediate drain from the American economy into OPEC treasuries was almost $25 billion annually. If nothing is done, President Ford has warned that by 1985 the inflow of foreign oil will grow to more than 12 million barrels per day, or well over 50 percent of American consumption, and the outflow of money will exceed $30 billion a year. Therefore, despite the fundamental and potential strength of America's energy position, it faces growing weakness unless it swiftly embarks on a program to reverse the trend and substantially reduce its vulnerability in the decade ahead.

Americans have always used more energy than most people living in other countries. Nevertheless, the United States has historically been largely self-sufficient in energy. Moreover, its two main sources of foreign oil were Canada and Venezuela. Canada has declared its intention of phasing out oil exports to the United States by 1981 while Venezuela is not expected to increase production. If the United States continues to maintain or increase its oil imports, the increased volume will necessarily come from the eastern hemisphere. In 1975 more than 20 percent of American oil imports came from Arab countries, and this share is likely to increase dramatically in the future unless strong measures are taken.

The United States can regain sufficient energy independence. The importance of achieving such a national goal must, however, be judged in a broad context of national and international security, economic and environmental issues.

ENERGY INDEPENDENCE DEFINED

Before proceeding to a discussion of these issues, it may be helpful to clarify what we mean by energy independence. At one extreme, energy reserves to assure America's military capabilities, assuming zero imports. At the other, independence might mean only sufficient energy reserves to assure America's military capabilities, assuming that the economy would be placed on a war footing if foreign energy supplies were interrupted. An appropriate position of independence is to be found somewhere between these extreme views.

Since independence in this sense is fundamentally a political concept, it seems most useful to define it in terms of political perceptions from three different quarters. First, American political leaders and the American people would perceive their country to be quite invulnerable to any foreseeable interruption in foreign energy supplies. Second, those countries which are in a position to interrupt American energy supplies would perceive the United States to be in such a position. And finally, those countries which rely on security commitments by the United States would perceive that those commitments were not subject to manipulation as a result of any American reliance on energy imports.

Sufficient energy independence may be obtained in various ways. America's current position is fortunately, full of options. Allocation and rationing plans may be fully developed on a standby basis. Strategic reserves of crude oil and refined petroleum products may be developed for use in the event of a supply emergency. Domestic production of fossil, nuclear, and other energy resources may be expanded—coal and uranium being the two prime candidates in the

immediate future. And domestic consumption of energy, especially petroleum, may be reduced—more energy-efficient cars and buildings being the most likely sources of large energy savings. No single action is likely to regain sufficient energy independence for America. Nor can independence be achieved overnight. Instead, a complicated set of interrelated measures must be agreed upon and implemented for a long period of time.

ENERGY SECURITY

In a world without central government, the ultimate in security for particular countries is freedom of action. However, the essence of security for the world community as a whole is stability. It is important to view energy security with this fundamental tension in mind. For our purposes, the problem may be assessed primarily in terms of superpowers and major powers.

A superpower conceives its national security interests in global terms. It guarantees the political security of certain other countries, and some of these may be very far away. A superpower should be largely self-sufficient in energy resources. Otherwise, its energy deficiencies will be especially potent leverage points, and therefore tempting targets for political pressure. If a superpower becomes substantially dependent on foreign energy supplies, it exposes not only itself, but possibly the entire world community, to major security risks. The energy-vulnerable superpower may be less reliable as a guarantor of another country's security since its own security problem will be so much more complicated. It may be a security risk to other countries because it may possibly use force to obtain access to foreign energy supplies. Finally, energy dependence may increase the risk of miscalculation and escalation in a clash of interests with another superpower.

At present there are two countries in the world with the attributes and self-conception of superpowers: the United States and the Soviet Union. The United States' claim to such a status rests on both economic and military grounds, whereas the Soviet Union's claim rests primarily on its military might.

For the first quarter century after the Second World War both superpowers were largely self-sufficient in energy resources. In the late 1960's the United States lost its position of substantial self-sufficiency in oil as consumer and environmental interests pushed ahead of national security interests. In particular, American oil imports from Middle East sources reduce international security for the world community as a whole. In the light of its commitment to Israel—a commitment reinforced by its participation in the Sinai agreements of September 1975—the United States became vulnerable to the Arab oil weapon. Moreover, the oil supplies of the major industrial countries in Western Europe and Japan are threatened, not only by the possibility of an Arab embargo against allies of the United States in an effort to reach that country indirectly, but also by American competition for scarce supplies. American dependence on foreign oil now threatens the energy security of the very countries whose overall political and military security the United States specifically guarantees.

The Soviet Union's international energy position may also be changing. Growing reliance on Western energy technology and capital seems

possible. However, there is no immediate prospect that the Russians will have to rely to a dangerous degree on foreign sources of supply for their essential fuels. It would seem easier for them to adjust to politically-inspired interruptions in the international transfer to them of technology or capital than for the Americans to adjust to a prolonged oil embargo. Therefore, energy deals with the West would not seem to affect the Soviet Unions' national security adversely or fundamentally compromise its position as a superpower. In short, Russia's position as a superpower is not likely to be compromised by increasing imports of Western energy technology. But the United States' position as a superpower may well be jeopardized by continued and growing reliance on oil imports, especially imports from the Arab countries.

Unlike a superpower, a major power does not have global security responsibilities. It conceives its national security interests primarily in regional terms. Like a superpower, however, a major power may well have worldwide economic interests. Many major powers are not and cannot be self-sufficient in energy resources.

There are now two groups of major powers: The industrially developed and the resource rich. Energy self-sufficiency is not a practical possibility for most of the industrial countries in Western Europe and Japan. However, a few fortunate industrially-advanced countries, such as Canada and Australia, are also rich in resources. Moreover, a few resource-rich countries with large populations, such as Iran and Brazil, are industrializing rapidly.

Major powers may seek energy security largely through interdependence in one form or another—fuel material imports, technology imports, foreign investment of monetary reserves. Indeed, most of them have no other choice. But the bargains struck between the industrial and the resource-rich major powers will in the future be bargains among equals. This signifies a major shift in global political power away from the industrial countries and toward the resource rich.

The global power shift in favor of the resource-rich countries was due to the cumulative effect of various causes. The industrial countries were successful in creating affluent consumer societies with enormous demands. Nationalism strengthened governments in the resource-rich countries. Perhaps most important, it became widely accepted that the international use of force was no longer permissible to gain access to natural resources in foreign countries. The U.S. Government has, however, gone out of its way to lift the restraint on the use of force in case of "some actual strangulation," to use Dr. Kissinger's oft-quoted phrase.

The center of political gravity now lies in a zone somewhere between the industrial and the resource-rich countries. Neither group of major powers will achieve its national or collective aspirations without cooperation from the other group. The two groups have a common interest in the cooperative exchange of industrial technology for energy resources. Indeed, long-term exchange relationships between the industrial and resource-rich major powers may, as they develop, increase international security.

What about energy security for the rest of the countries in the world? If the superpowers are reasonably independent in their energy supplies and the industrial and resource-rich major powers are

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strongly interdependent, the result will be a much more stable international energy situation than at present. In such circumstances, the smaller advanced countries may also be more secure. Moreover, the resource-poor, less-developed countries will at least exist in a political environment that is more likely to support their own struggles for economic and social development.

From the preceding discussion it is clear that the United States occupies the pivotal position in the world as to international oil security. If it rapidly reduces its oil imports from the Arab countries to a low level, the Arabs' ability to use oil as a direct weapon against the United States could be ended. The credibility of continued American support of Israel (for which there seems to be no alternative as long as Arab hostility towards Israel persists) would thus be enhanced. The oil supply security of Western Europe and Japan might also be increased. Whether this effect would be achieved by American energy invulnerability would depend on the Arabs' perceptions of their ability to influence the United States by embargoing Western Europe and/or Japan. It would also depend on the outcome of negotiations among the major powers—industrial and oil rich. By minimizing its own oil vulnerability, the United States would regain a substantial amount of the freedom of action that it may well need if it is to continue to as a superpower with global security responsibilities.

There are, however, potential risks as well as benefits in America's independence from Arab oil sources. The United States may have less incentive to push Israel toward a compromise political settlement with the frontline Arab countries. Given the increased American capacity to act decisively in support of Israel, the West European countries may feel safer in giving diplomatic support to the Arab cause against Israel in exchange for increased oil supply security for themselves. The United States might thus become even more isolated than at present (if this is possible) in its support of Israel.

How might the Soviet Union respond, if the United States were to remain substantially dependent on oil imports and were to become increasingly entangled in a network of interdependent relations in the Middle East? To the extent that America's reliance on Middle East oil imports leads to strong cooperative relationships with Iran and the Arab countries, Soviet influence in the Middle East might be diminished. On the other hand, the Soviet Union might view America's oil dependence as a vulnerability it could exploit in the long run, especially if the conservative monarchies in a few Gulf states were to be replaced by radical governments. On the dark side, therefore, if the policy of detente were to be reversed, the Soviet Union might be tempted to step up its support for the guerrilla activities of the more radical Arab groups. On the bright side, however, the Russians might grow more consumer-oriented and, consequently, more interested in importing Western technology than in exporting the Maxist-Leninist revolution. They might be seriously interested in taking steps in relation to nuclear arms control and trade with the West that would make detente irreversible. If so, the Russians may begin to develop more complex interdependent relations with the West European countries and Japan, even as the United States pursues interdependence with the Middle East countries. These policies would lead both superpowers into uncharted waters.

The essence of economy is the efficient use of resources over time, and economic efficiency equates with least cost. The political structure that constrains economic activity raises insurmountable barriers to economic efficiency on a worldwide scale. Therefore, in the evolving world economy, no nation or private enterprise can expect to achieve the economic optimum in using up the earth's stock of nonrenewable energy resources. A rough approximation to efficiency, in which economic calculations are tempered by political judgment will be difficult enough to develop.

In producing its energy resources, a nonindustrial country may be exchanging oil, which yields no return except when sold or used, for a development project, which is intended to increase its national productive capacity in the long run. To the extent that the resource owner's profits accelerate economic development in that or some other less-developed country, it is arguable that the wealth redistribution is beneficial to the world economy as a whole. Therefore, some excess profits for owners of energy resources may be politically tolerable, if not acceptable as a matter of economic principle.

Before the 1973–74 price revolution, oil provided the floor for world energy prices. International and inter-fuel competition tended to drive energy prices generally down towards the floor. Since the revolution, the world oil price set by OPEC has served as a ceiling, and other fuel prices are tending to rise towards it. Energy prices in general are now so high that a world oil glut is being avoided only by large cutbacks in OPEC production. Moreover, if early 1975 energy prices are maintained, high-cost fossil energy resources, which were largely unexplored and untapped before the 1973–74 crisis, may eventually be developed, thus enabling a number of countries to achieve self-sufficiency. However, the OPEC producers may instead set the oil price at a level that is low enough to keep the importing countries from making the firm policy decisions required to attract the capital and support the investments needed to develop large additional energy supplies. Alternatively, the large investments may be forthcoming, but the costs of most new energy supplies may nevertheless turn out to be higher than expected so that oil at $10–12 per barrel continues to be attractive. Such are the enormous uncertainties that cloud the world's energy future in the short term.

In political economy, as with security, it is useful to classify countries as superpowers and major powers—industrial and resource rich. There is only one superpower in the world, economically speaking, and that is the United States. In terms of the size of its national market, its gross national product, and its foreign trade and investments, the United States occupies a unique position. The Soviet Union's economy, which is the second largest, is only a little more than half the size of the American economy. Moreover, it is still largely self-contained, except for strong interaction with the economies of the East European socialist countries.

A large economy is not necessarily healthy. Because of the size of its economy, however, America's economic behavior will necessarily have a decisive influence upon the future evolution of the world economy as a whole. The United States (with its enormous oil con-

sumption, large current import levels and undeveloped fossil energy resources) and Saudi Arabia (with its enormous oil production capacity, low-cost oil reserves and surplus revenue) are the two key actors maintaining the oil demand/supply balance at current price levels. There is little doubt that at current or somewhat lower world oil prices, the United States has large reserves of fossil energy that could be economically developed. These include some offshore oil and gas, extensive reserves of coal for direct burning and for the manufacture of coal-based synthetic fuels, and perhaps shale oil.

In this economic setting, the question is whether the future trend of world oil prices will lead to a reasonably efficient or a grossly inefficient pattern of use of world energy resources. If the current world oil price is anywhere close to an efficient price, then the development of America's high-cost fossil fuel resources will be strongly in its national economic interest. If, however, current world oil prices are actually exorbitant, then the strongest possible action the United States can take to drive the world price down will be to withdraw as rapidly as possible from the world market. Whether and how far the oil price would fall as a result of the largest oil importer withdrawing from or reducing its role in the world market would depend on how far the oil producers with large petrodollar surpluses, such as Saudi Arabia and Kuwait, cut back their current production in order to avoid a glut. A possible outcome would be a return, part way at least, to the basic international economic relationships that existed before the oil price revolution. The American domestic oil price, or prices for synthetic substitutes, would provide a ceiling for the world oil price, while the Persian Gulf oil price would once again be the floor. Of course, the price levels of the ceiling and the floor would be much higher than before.

A dramatic improvement in its balance of payments would be another important reason for the United States to reduce its role in the world oil market. The foreign exchange advantage gained by the United States might be viewed as an offset to the commercial competitive advantage Western Europe and Japan would enjoy as a result of lower oil costs as a factor of production. But if reductions in America's oil imports caused the bottom to fall out of the world oil market and the price dropped to quite low levels, it would remain to be seen how much pressure from consumer and manufacturing interests the U. S. Government could withstand before America once again moved into the world market as a large oil importer.

A twofold conclusion emerges: First, America's pursuit of energy independence may, on balance, prove to be in its national economic interests. And, second, an orderly reduction in America's role in the world oil market seems quite clearly to be in the interests of the world economy as a whole. If, however, the United States is to act decisively to reduce its oil imports, the Government may find it necessary to provide substantial incentives or guarantees for investments by private industry in high-cost domestic energy development. Whether this form of Government intervention is necessary or desirable is, at the time of writing, the subject of increasing debate in the United States as a result of President Ford's proposal, in September 1975, for a

Federal corporation to underwrite or guarantee $100 billion in energy industry investments in the decade ahead.

The major powers—industrial and resource rich—are in roughly the same roles with respect to economic issues as they are in relation to energy security. The degree of departure from economic efficiency would depend largely on the success of the major industrial countries in oil negotiations with the members of OPEC. The main objective in such negotiations would be agreement on a system of oil prices and production policies that would serve as a basis, on the one hand, for industrial countries to make long-term economic adjustments and, on the other, for oil exporters to fund long-term economic development plans.

The major industrial countries would, of course, be seeking a reduction in the monopoly profit which constitutes most of the current OPEC oil price. Price stability would, however, be as important as price level to the industrial countries and to the functioning of the world economy in general. It would be important for the major industrial countries not to seek such a large reduction in price that the United States, having at considerable cost extricated itself from the world market, turned around and plunged in once more. Indeed, the U.S. Government's awareness of this problem seems to be one of the main reasons behind its proposals early in 1975 for agreement among the industrial countries on an oil price floor. But the United States can, if it wishes, institute its own price floor, leaving the major industrial countries, with their diverse resource bases and economies, to do as they wish in this regard.

The success of the major industrial countries in their negotiations with OPEC would depend largely on the relative bargaining power of the two sides. Who is at the negotiating table would be an important factor in determining relative bargaining power. Until recently, the oil companies negotiated with the OPEC governments. In effect the interests of the major oil-importing countries of Western Europe and Japan were largely represented by private companies. If the companies continue to occupy the front row seats at the conference table, there is likely to be no negotiation, but rather a continuation of OPEC dictation. The OPEC governments would try to capture in the price of crude oil not only the profits inherent in their monopoly control over supplies of crude oil, but also any profits that might result from the hitherto unexploited monopoly power of the multinational oil companies in downstream marketing operations. The bargaining power of the industrial countries is likely to be greater if their governments face the OPEC governments across the conference table than if the private sector continues to represent them.

But what effect will the U.S. Government's participation have on the industrial countries' position in the negotiations? If the U.S. Government casts itself in the leading role, the bargaining power of the industrial countries is likely to be reduced. The deep American entanglement in the Arab-Israeli conflict would be a weakness that the Arab producers especially might exploit. From the point of view of the major industrial countries, therefore, the best negotiating situation with OPEC would be created if the United States were firmly committed to regaining its own energy independence. As long as the

United States remains a large oil importer, however, the major industrial countries would appear to be better off with the United States participating in, but not leading, the negotiations, than if it were on a separate bilateral negotiating track with certain OPEC countries such as Saudi Arabia or Iran.

The preceding discussion is focused solely on oil and the development of more stable economic relations between the main oil producer-exporters and the industrial consumer-importers. But what has been said about the American role in negotiating something like an oil commodity agreement should not be misunderstood. The analysis does not imply America's withdrawal from either active diplomacy or a major role in trade and economic development aid in the Middle East. Indeed, the United States can and should continue to be a major supplier of technology suitably adapted for industrialization in the region, and it must continue its deep diplomatic involvement there. As it becomes less interested in OPEC oil as a consequence of its own strategy for energy independence, the opportunities for constructive American economic relations with the Middle East countries in particular may well expand.

Despite takeovers by OPEC governments at the production end, the world market would simply cease to function if there were no middlemen to operate the far-flung and complex logistics system. The multinational oil companies, the bulk of which are privately owned, have traditionally served as middlemen, performing the operations that lie between oil in the ground and oil in the petrol tank or furnace. This is a valuable role for the private companies that governments would do well to preserve, at least until they have developed and tested a more effective substitute.

Furthermore, the efficient operation on a global scale of any fuel cycle, whether oil, gas or nuclear, requires highly centralized expert management at the top. The private multinational corporation offers an option for centralized economic management within a decentralized political system. It is an option that is already intact and working. The capital and know-how controlled by the private multinational oil companies are, therefore, invaluable assets that should be efficiently used in the world energy economy.

Because of their monopoly power, the oil-rich countries have the power to tax the wealthy industrial countries. A few of the oil-rich Arab shiekdoms are accumulating enormous wealth beyond their current needs. Once accumulated, it is important for these surplus revenues to be invested in a way that will make a major contribution to economic welfare. Should the poor two-thirds of the world receive special consideration in the investment of surplus oil revenues? The investment pattern thus far reveals little inclination on the part of the Arab countries with surplus funds to work toward a redistribution of wealth in favor of the poor.

Even though they are at present burdened by what may appear to be oppressive OPEC taxation, the wealthy industrial countries would do well to recognize as a distinct possibility that their own welfare in the long run hinges on two developments. The first is the creation of enough purchasing power outside the present industrial world to avoid widespread social chaos and revolutionary violence. And the second is the acceleration of their own evolution from industrial societies, with

high and apparently insatiable demands for raw materials, into various forms of more service-oriented post-industrial societies. In both these developments, the United States is in a position to play a leading role, along with the major industrial countries.

Neither the affluent industrial countries, nor the oil producers with large financial surpluses, are likely to provide assistance to the poor countries on the scale required to keep development options open in the future unless the effort is made cooperatively. In this regard, the World Bank's role may be substantially enlarged and its expertise fully used. Through such an existing institutional structure, the economic aid of Middle East monarchies and Western democracies might be commingled and effectively channeled to poor countries in order to give them a fair opportunity to take off into economic development.

ENERGY-ENVIRONMENT

Man is the only living being with the power to make it impossible to live on the Earth because of environmental pollution. Human activity involving the production and consumption of energy is by far the largest cause of global pollution. Fortunately, the basic life support systems have pollution-carrying capacities that are quite large in relation to man's reasonable needs and these support systems also have the ability to sustain localized catastrophes and eventually recover. But the scale of human activity resulting from multiplying total population by technological power by material affluence has now reached the threshold of danger.

A country that uses its own energy resources will strike its own balance between environmental preservation and economic development. Yet where such a country strikes the balance will affect the global environment. If an energy self-sufficient country favors strong measures to protect its environment, so much the better for the rest of the world. Energy resources will be conserved and the amount of that country's contribution to global pollution levels will be reduced.

The United States confronts a series of environmental choices that can no longer be postponed. Indeed, one of the reasons why it entered the world oil market was an inability to resolve its domestic energy-environment conflict. What would be the environmental consequences of a growing American reliance on foreign oil supplies? How do those consequences compare with America's pursuit of energy independence?

For the United States itself, continued substantial reliance on foreign oil would appear preferable from an environmental viewpoint. A strong move toward energy independence for America would involve large-scale drilling for oil and gas off-shore in frontier areas; extensive strip mining of coal deposits under the north central plains; and substantial acceleration of the American nuclear power program. It is likely to be necessary to ease temporarily certain air pollution standards to permit increased use of coal while new environmental control technology is being developed. If environmental controls have to be relaxed, such action should be limited in time and scope.

However, in addition to developing its own supplies, the United States can move toward energy independence by reducing future growth in demand. A number of conservation measures are under active consideration, including fuel economy standards for cars, build-

ing-insulation requirements and the adoption of less energy-intensive industrial processes. Because of the enormous size of the investment in existing energy-using equipment and facilities, the large energy savings that may be possible through such conservation measures may take 5 to 10 years to become apparent.

The quality of the global environment will be less degraded in the long term if the United States opts for energy independence, especially if it has a strong conservation policy that minimizes environmental damage to itself. Indeed, long-term conservation, without an undue departure from economic efficiency, would provide a way for the United States to protect its environment while at the same time enhancing its national security.

CONCLUSION

National governments cannot escape the necessity of choice as to their basic energy policies. Indecision is itself a form of decision with enormous consequences. Further procrastination on this score by the United States could well have disastrous consequences. A cold winter in the northern part of the United States could cause an unmanageable shortage of natural gas. A hot war in the Middle East could create an unmanageable oil shortage. If the United States fails to cope with its particular challenge, the rest of the world will also be severely damaged.

America must choose between energy independence or growing dependence. In making that choice the bottom line should be national and international security. A growing vulnerability to interruptions in its oil supply is dangerously incompatible with America's specific responsibility as guarantor of the security of the Nato countries. Japan and Israel. Energy independence for America should thus not be identified with any retreat into a Fortress America. Quite the opposite. If the U.S. Government cannot opt decisively for energy independence and the American people do not make the sacrifices necessary to achieve this goal, then America's current role as one of two superpowers with certain global security responsibilities may be in serious doubt.

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Energy and security: implications for American policy. Croton-on-Hudson, N.Y., Hudson Institute [distributed by NTIS] 1974. 1 v. (various pagings)
"AD 785 084"
"...to present a perspective on how energy needs impinge upon U.S. national security now and for the next two decades."

Arida, Touma.
Oil and power politics; an exchange of views. New leader, v. 57, Feb. 17, 1975: 9-13.
Offers a rebuttal to "Thinking about an oil war" (Nov. 11, 1974) by Paul Seabury. Author says "not only didn't the oil price increase cause the international monetary and energy crises, but the very opposite is true."

Arpan, Jeffrey S.
The shifting balance of power in the oil environment. Atlanta economic review, v. 25, Sept.-Oct. 1975: 32-36.
"Several significant changes in the relative bargaining power of oil importing and exporting nations resulted from the formation of OPEC. Here is an explanation for these shifts and some possible courses of action for the United States."

Arriagada, Juan Carlos.
The power of the oil countries. Intereconomics, no. 12, Dec. 1973: 372-375.
"What will be the consequences of the oil producing countries' strong market position for these states themselves as well as for the industrial nations relying on the inflow of oil?"

Attiqa, Ali A.
The role of OAPEC in promoting cooperation between its members and oil importing countries. Middle East economic survey, v. 17, May 17, 1974, suppl.: 6-8.
Text of address by the Secretary General of the Organization of Arab Petroleum Exporting Countries in London, May 8, 1974.

Auspitz, Josiah Lee.
Oil: the strategic utility. New republic, v. 172, Apr. 26, 1975: 13-17.
"The chief flaw in the world's economy today is that the management of an essential utility--the international oil supply--has been left in irresponsible hands by the inattention of the US government and cold indifference of the oil companies." Discusses briefly oil diplomacy with emphasis on current U.S. policy.

Barger, Thomas C.
Energy policies of the world: Arab States of the Persian Gulf. Newark, Center for the Study of Marine Policy, University of Delaware, 1975. 93 p.
"This monograph gives a succinct but clear overview of the land and peoples of the Arab states of the Persian Gulf, a detailed analysis of the production and pricing policies of oil in the past and present, valuable information on the Organization of Petroleum Exporting Countries and the oil embargoes, and some conclusions about the future of energy policy that will affect U.S. and world political-economic relations."

Bechtoldt, Heinrich.
The diktat of the oil millions. Aussenpolitik [English ed.], v. 25, third quarter, 1974: 303-315.

Bennett, Jack F.
New oil cutbacks counterproductive, Bennett contends. Money manager, v. 3, July 15, 1974: 5, 38, 43.
In his testimony before the House Banking and Currency Committee, the Under Secretary of Treasury for Monetary Affairs discusses the impact of the reduction in anticipated levels of oil production.

Berry, John A.
The growing importance of oil. Military review, v. 52, Oct. 1972: 2-16.
Four major topics are discussed: the degree of reliance on Middle Eastern oil; the degree of reliance by U.S. allies, primarily NATO, on Middle East oil; the possibility of a reduction or cutoff in Middle Eastern oil; the impact of nationalization of U.S. oil companies operating in the Middle East.

Blair, John M.
The implementation of oligopolistic interdependence: international oil, a case study. Journal of economic issues, v. 9, June 1975: 297-318.

Bohi, Douglas R. Russell, Milton.
U.S. energy policy: alternatives for security. Baltimore, Published for Resources for the Future by Johns Hopkins University Press [c1975] 131 p.
Focus is on the role that oil imports might play in the foreseeable future. Holds that energy policy should concentrate on two goals, energy security and an optimal level of consumption.

Brewer, John V.
Petropolitics. SAIS review, v. 18, winter 1974: 24-31.
"In order to determine the significance of oil as an instrument of power it is necessary to examine the ways that control over oil resources and production can be turned to a nation's advantage."

Brucan, Silviu.
Energy and development. Pacific community, v. 5, July 1974: 614-625.
"It is the assumption of this study that the energy crisis is primarily a development issue, and therefore it should be viewed and assessed within the context of what is called the North-South conflict." Suggests "a tight and mutual interdependence between Northern and Southern partners, built into a long-range economic program...[so] that both parties acquire a vested interest in stabilizing supplies, prices and currencies in the world market."

Burchard, Hans-Joachim.
The dialogue with the OPEC-countries. Aussenpolitik, v. 26, no. 2, 1975: 137-157.
Discusses the exploratory talks between the major oil consumers, major producers and other developing countries that are not members of OPEC concerning possible solutions to the grave problems that have arisen as a result of the measures undertaken by the OPEC countries in 1973 and 1974.

Cahn, Herbert.
Israel, the Arabs, and oil money. National review, v. 27, Feb. 28, 1975: 211-213, 239.
"The Arabs are learning that they too could lose the game of global politics being played in the Middle East. And lose it without taking the rest of the players with them."

Campbell, John C. DeCarmoy, Guy. Kondo, Shinichi.
Energy: a strategy for international action; a report of the Trilateral Task Force on the Political and International Implications of the Energy Crisis to the Executive Committee of the Trilateral Commission. [New York, Trilateral Commission, 1974] 48 p. (Triangle papers, no. 6)
Second report of the Trilateral Task Force on the Political and International Implications of the Energy Crisis concentrates on non-monetary aspects. Main emphasis of the report is on the political, social and international consequences of the situation faced by the Trilateral regions.

Campbell, John C. DeCarmoy, Guy. Kondo, Shinichi.
Energy: the imperative for trilateral approach; a report of the Trilaterial Task Force on the Political and International Implications of the energy crisis to the Executive Committee of the Trilateral Commission. [New York, 1974] 36 p. (Triangle papers, no. 5)
First report of the Trilateral Task Force on the Political and International Implications of the Energy Crisis. Examines the economics of the future energy picture, the policies of it, and offers proposals to establish common purposes and to set general directions for policy.

Chaplin, Dennis.
Middle East oil politics. European review, v. 23, autumn 1973: 7-10.
"The geo-political discrepancies between supply and demand have exposed the Western powers to what could become the most extensive political blackmail in history."

Cicchetti, Charles J. Gillen, William.
The mandatory oil import quota program: a consideration of economic efficiency and equity. In U.S. Congress. Joint Economic Committee. Subcommittee on Priorities and Economy in Government. The economics of Federal subsidy programs; a compendium of papers. Part 8. Washington, U.S. Govt. Print. Off., 1974. p. 995-1017.
Reviews the historical development of the Mandatory Oil Import Quota Program and describes the manner in which it presently functions. Also reviews several analyses made during and shortly after the Cabinet Task Force Report, and updates these to reflect changing market conditions. Finally, analyzes the equity and efficiency aspects of the present program in the context of its objectives, and considers alternative means of achieving those objectives.

Cochrane, S. McL.
The price of OPEC crude oil. Energy policy, v. 3, Sept. 1975: 181-191.
"Dr. Cochrane describes a methodology for determining the price of OPEC crude oil in 1985 assuming a zero growth in output. He reviews the energy balance sheets of OECD areas--North America, Western Europe and Japan--and concludes that a price of $34 per tonne could be realised by members of OPEC by 1985."

Cohn, Lee M.
Energy crisis strains the world economy. Washington star-news, Jan. 20, 1974, p. A1, A10; Jan. 21, p. A1, A4; Jan. 22, p. A1, A6.
Series of three articles on the impact of energy crisis on the world economy.

Crockett, Andrew D. Ripley, Duncan M.
Sharing the oil deficit. Finance & development, v. 12, Dec. 1975: 12-16.
"How should the developed countries share the deficit caused by the rise in oil prices in their combined balance of payments with the oil exporting countries? This article explores some of the theoretical approaches which may lead to an answer."

Dasgupta, Biplab.
Soviet oil and the third world. World development, v. 3, May 1975: 345-360.
Commences with an historical account of the growth of the Soviet oil industry. Describes "the role played by the 'Soviet oil offensive' in the 1960s and its success in weakening the grip of the oil oligarchy of the seven major vertically-integrated international corporations on the world oil trade, in the disintegration of the world-parity-pricing system, and in the emergency of OPEC as a powerful factor in the political economy of world oil. In the final section, the paper assesses the role of Soviet oil exports in the present world context and in the future."

DeOnis, Juan. Wilford, John Noble. Smith, William D.
World fuel and energy situation. New York times, Apr. 16, 1973, p. 1, 28; Apr. 17, p. 1, 26; Apr. 18, p. 1, 21.
A series of three articles on the world fuel and energy situation.

Dickson, Paul.
The oiling of American foreign policy: now comes the power struggle. Present tense, v. 1, spring 1974: 21-22, 24-26.
The energy crisis "has focused attention on the role of the great international oil companies have played in shaping American foreign policy."

Dorsey, Bob R. Hammer, Harold H.
International oils and Gulf Oil Corporation; interview with the chairman and chief executive officer of Gulf Oil Corporation. Barron's, July 29, 1974, p. 5, 18-19; Aug. 5, p. 5, 13-14.
Discusses the global climate for international oils and Gulf's strategy for survival.

Duerr, Michael G.
Where will all the petrodollars go? Conference Board record, v. 11, Oct. 1974: 42-45.
"How will these petrodollars be used? Will they accumulate in Mideastern treasuries, or will they flow back into circulation? And in what form will they flow back? According to a Conference Board panel of world business leaders, the answers to these questions will help determine the world's economic course during the remainder of the 1970s."

El Mallakh, Raqaei.
American-Arab relations: conflict or cooperation? Energy policy, v. 3, Sept. 1975: 170-180.
"The oil embargo of 1973 appeared to turn the US supply situation into a problem of doomsday proportion. Dr. El Mallakh argues that both producing and consuming countries can benefit from increased understanding of their natural economic links and recognition of their interdependence in the world energy market."

Enders, Thomas O.
OPEC and the industrial countries: the next ten years. Foreign affairs, v. 53, July 1975: 625-637.

Energy and scarce world resources. Current history, v. 69, July-Aug. 1975: whole issue.
Partial contents.--Oil and the OPEC members, by R. Mallakh.--Energy self-sufficiency in the Soviet Union, by L. Dienes.--Mineral resources in the new international order, by J. Helliwell.--Developing alternative energy sources, by H. Perry.--International controls of scarce resources, by S. Brubaker.

The Energy problem and the Middle East. Middle East information series, v. 23, May 1973: 1-96.
Contents.--Background to the energy "crisis."--Oil and its implications for foreign policy.--Oil, economics and finance.--The oil states: new regional and global relationships.
Includes articles by Ernst Frankel, M. A. Adelman, Joel Darmstadter, F. R. Silbey, James Akins, S. L. Margoshes, T. H. Moran, and M. I. Goldman.

Epstein, Edward Jay.
The secret deals of the oil cartel: an illustrated history. New York, v. 8, June 23, 1975: 41-57; June 30: 40-57.
A two-part series offers a short history of how the seven international oil companies acted like a cartel that controlled almost all the oil of the Middle East and more than two-thirds of the world's supply. Explains the issues involved in the present-day energy crisis and how OPEC gained control over the oil resources in their countries.

Faisal and oil: driving toward a new world order. Time, v. 105, Jan. 6, 1975: 8-28, 31-32.
As a crucial decision-maker and a symbol of Arab petropower, Saudi Arabia's King Faisal is Time's man of the year. Politically 1974 was marked by the increasing cohesion and power of the Arab world and the King played a key role.

Farmer, Richard N.
The coming crack in OPEC. Business horizons, v. 18, Dec. 1975: 5-11.
Examines nine major points which will affect oil prices in the next five to ten years, including: the petrodollar, the role of Saudi Arabia, production, new producers, and nationalization.

Field, Michael.
Oil: OPEC and participation. World today, v. 28, Jan. 1972: 5-13.
"The oil-producing countries want more participation in the development of their resources. But the companies are forming a united front."

Fieleke, Norman S.
Oil and international payments. Federal Reserve Bank of Boston New England economic review, Nov.-Dec. 1974: 29-40.
"Could the international economy remain stable in the face of such massive accumulation of funds by the OPEC countries as is forecasted by the World Bank? In my view, the question is probably academic. It is unlikely that the OPEC countries will accumulate such wealth, mainly because the resourcefulness of mankind should allow the development of plentiful substitutes for OPEC oil."

Fixler, L. Donald. Ferrar, Robert L.
Oil pricing policy options from the producers' point of view: a theoretical approach. Energy policy, v. 3, June 1975: 136-143.
The authors conclude that "OPEC's economic self interest will be enhanced by a united pricing and output policy coupled with price discrimination" based upon an examination of "eight possible policy options involving the questions of limited versus unlimited reserves, short-term versus long-term considerations and static versus dynamic analysis."

Floating on oil. Economist, v. 250, Mar. 23, 1974, suppl.: 1-77.
Contents.--Figuring out the oil crisis.--Interviews.--Arab investment--reports from: Geneva and Zurich, Paris, Frankfurt, London, Tokyo.--The forgotten poor.--The gold conundrum.

Fowlkes, Frank V.
'Petrodollar' surpluses loom as problem for monetary system, U.S. energy crisis. National journal reports, v. 5, Aug. 18, 1973: 1211-1217.

Frank, Richard S.
Ford seeks price guarantees for fuel to aid U.S. development. National journal reports, v. 7, Mar. 8, 1975: 357-366.
"The key to the strategy is price protection for the new sources through adoption of a common price below which the consuming countries would not permit oil prices to drop."

Frenkel, H. D.
The October 1973 petroleum revolution. New outlook; Middle East monthly, Mar.-Apr. 1974: 31-43; May: 38-47; June: 34-42.
First part of article outlines the reasons for and the consequences of the Oct. 1973 petroleum revolution. Part two analyzed "who profits from the revolution." Last part deals with the situation in Israel and the effect of the petroleum revolution in that country.

Frenkel, H. David.
The petroleum revolution: a year later. New outlook, v. 18, Feb. 1975: 27-35.
"In a sequel to his 3 articles, published in the March/April, May and June 1974 issues of NEW OUTLOOK, Dr. Frenkel analyzes the winding course of the oil-crisis which started with the October 1973 War."

Friedland, Edward. Seabury, Paul. Wildavsky, Aaron.
Oil and the decline of Western power. Political science quarterly, v. 20, fall 1975: 437-450.
Begins discussion with oil price increases, with international and national economies. Focuses on what OPEC might do and how other nations might be expected to react. Says oil has greased the way for greater consolidation in the Soviet Bloc and for distintegration of the Western Alliance.

From concession to participation: restructuring the Middle East oil industry. New York University law review, v. 48, Oct. 1973: 774-816.
Comment offers a brief history of the concession arrangement, an analysis of the economic and political conditions which facilitated the emergence of participation as an alternative to nationalization, and considers the operations of the industry under the new agreements.

Gall, Norman.
The challenge of Venezuelan oil. Foreign policy, no. 18, spring 1975: 44-67.
"Within a few months, Venezuelans are expected to nationalize their oil industry. How successfully they do it...may help decide the degree of future U.S. dependence on Middle East oil, the structure of the international petroleum industry, and the prospects for democracy in Latin America." Comments on Venezuela's role in OPEC.

Gardner, Frank J.
Changes restructuring worldwide oil. Oil & gas journal, v. 72, Dec. 30, 1974: 105-148.
Outlook for international oil is for producing-country governments to assume more of the historic role of the international oil companies. All OPEC countries are expected to assume 100% participation during the coming year. Refinery capacity gains in non-Communist world.

Gasteyger, Curt, ed.
The Western world and energy. Paris, Saxon House for the Atlantic Institute for International Affairs [1974] 104 p. (The Atlantic papers, 1974, 1)
Partial contents.--The present and future of energy resources, by M. Sakisaka.--The energy policy of the Soviet Union, by W. Gumpel.--China's energy policies, by M. Toussaint.--The economic monetary implications of the oil crisis, by G. De Carmoy.

Hansen, Joachim.
The challenge of the OPEC countries. Aussen politik [English ed.] v. 22, 2d quarter, 1971: 175-186.
"Speaks of a new chapter in the history of the economics of the world's oil supply: the first occasion on which the oil-producing and oil-exporting countries - known as the OPEC group - and the oil-producing companies met as two solid blocs turned the negotiations over the price commands of the producing countries into the most difficult confrontation ever of the two opposing interests."

Hansen, Joachim.
A new era in international oil economy. Aussenpolitik [English ed.] v. 24, no. 2, 1973: 200-209.
Within less than two years the oil producing countries have forced through the beginnings of participation in the oil companies. Article traces the process of the disputes between the governments and the companies, dealing in particular with the case of Iran.

Hartshorn, J.E.
A diplomatic price for oil? Pacific community (Tokyo), v. 5, Apr. 1974: 363-379.
"Nobody can fully judge yet how effective the Arab restrictions and embargo were last winter as an indirect political weapon against Israel." The Arab exporters demonstrated a new political will to use emergent economic power. This situation, the author says, requires diplomacy, but of a different kind.

Hartshorn, J. E.
Oil diplomacy: the new approach. World today, v. 29, July 1973: 281-290.
"The main task in oil negotiation will be in the coming years to persuade the countries controlling these vital energy reserves that expansion of output to match demand is worth their while."

Hassan, Mostafa F.
International petroleum and U.S. market. Nebraska journal of economics and business, v. 13, autumn 1974: 109-116.
Until the early 1950s international petroleum policy was dominated by the major international petroleum firms. Discusses changes in relative power of the oil exporting countries and the oil companies, the supply shortage and the U.S. market, the price increase in 1973/74, and future prospects.

Houthakker, Hendrick S. Kennedy, Michael.
The outlook for petroleum prices. Wall Street journal, Jan. 22, 1974, p. 22.
"Reasonable assumptions about demand and supply elasticities suggest that the Persian Gulf producers are pricing themselves out of export markets in the long run."

Howe, James W.
The U.S. and world development: agenda for action, 1975. New York, Praeger [1975] 276 p. (Praeger special studies in international economics and development)
Partial contents.--Focus on the fourth world, by H. Low and J. Howe.--Next steps toward global food security, by L. Brown and E. Eckholm.--Trade initiatives and resource bargaining, by G. Erb.--The OPEC nations: partners of competitors?, by J. Grant.--The emerging challenge: global distribution or income and economic opportunity, by R. Hansen.
"This volume is the third in the Agenda for Action series prepared annually by the Overseas Development Council."

Hudon, Gerald.
Stormy Venezuelan oil politics paved way for creation of OPEC. International perspectives, May-June 1975: 36-40.
Says the present success of OPEC "is due to Venezuela, which maintained an avant-garde attitude in its relations with oil companies throughout the history of its oil industry and made opportune recommendations to the other exporting countries."

Ignatius, David.
Shaking the sheiks. Washington monthly, v. 6, Feb. 1975: 18-22.
Points out that one threat that seems to terrify the oil magnates is the potential ability of the U.S. and its allies to manipulate the price of gold. Stresses that the point that should be made to the Arabs is that if we continue to use the weapons against each other all of us are going to lose.

Ignotus, Miles.
Seizing Arab oil. Harper's magazine, v. 250, Mar. 1975: 45-49, 51-52, 57-58, 60, 62.
Says all nonviolent strategies to break OPEC oil cartel are ineffectual. "The only feasible countervailing power to OPEC's control of oil is power itself--military power." Explains how this might be accomplished.

An Importers' organization? Petroleum press service, v. 40, Apr. 1973: 127-129.
"The urgent need for a co-ordinated Atlantic-Japanese energy policy, to counter the growing power of OPEC, is stressed in a paper by Mr. Walter J Levy, the well-known oil economist."

International Oil Symposium, London, 1972.
Selected papers. London, Economist Intelligence Unit, 1973. 160 p.
A series of seminars considering three subject areas: oil and the requirements for energy, capital requirements and the oil industry, the changing role of governments.
Partial contents.--The geographic location component in oil, and gas reserves evaluation with special reference to Western Europe's oil supply 1970-1990, by P. R. Odell.--The U.S. energy situation, by J. O' Leary.--The international availability of investment capital, by J. H. MacDonald.--Future policy alternatives facing the Western oil companies, by M. A. Adelman.

Issawi, Charles.
Middle East politics and the energy crisis: no. 2, checking on the consequences of oil squeeze by Arab states. International perspectives, Mar.-Apr. 1974: 9-12.

Keatley, Robert.
Hands tied: what can the U.S. do about high oil prices? Actually, very little. Wall Street journal, Sept. 26, 1974, p. 1, 21.
"Despite Ford's tough talk, U.S. won't use force; other plans ruled out; 'our policy is empty box.'"

Khan, M. A. Saleem.
Oil politics in the Persian Gulf Region. India quarterly, v. 30, Jan.-Mar. 1974: 25-41.
Studies "the oil politics of the Gulf under the following broad rubrics: (1) the energy crisis; (2) the rise in oil prices, and (3) oil as political weapon."

Kindleberger, Charles P.
Oil and international money. Oriental economist, v. 42, Aug. 1974: 13-19.
Urges the U.S., Japan and Western Europe to form a new joint effort under effective joint leadership to settle the large-scale problems raised by the necessity to transfer $50 billions of wealth from a variety of countries to oil producers.

Kissinger, Henry.
Kissinger on oil, food, and trade. Business week, no. 2363, Jan. 13, 1974: 66-69, 73-74, 76.
In an interview, the Secretary of State says that today's economic problems can be solved only through international action. Also says that the U.S. might consider force as a last resort against the oil cartel.

Kissinger, Henry A.
Energy: the necessity of decision. Atlantic community quarterly, v. 13, spring 1975: 7-22.
An address by the Sec. of State before the National Press Club, Feb. 3, 1975, in which he discussed proposals of U.S. to be presented at a Conference of Members of the International Energy Agency over the problem of the dependency of consuming countries on oil imports.

Kraar, Louis.
OPEC is starting to feel the pressure. Fortune, v. 91, May 1975: 186-191, 278-280, 285-286.
"The worldwide drop in oil consumption is giving the producing nations a taste of the troubles they will face in the future. In the councils of the cartel, the members fear 'a dangerous race of price cuts.'"

Kraft, Joseph.
Letter from OPEC. New Yorker, v. 50, Jan. 20, 1975: 64-75.
Describes a visit with Dr. Abderrahman Khene, the Secretary General of OPEC in December 1974 and furnishes a narrative of OPEC's takeover of the oil cartel with emphasis on petroleum price increases.

Krasner, Stephen D.
The great oil sheikdown. Foreign policy, no. 13, winter 1973-1974: 123-138.
The Mideast war has made apparent the high costs of continued American support for the international oil oligopoly. Without the enormous revenues generated by collusive pricing, oil would be a far less potent political weapon. An embargo could bankrupt exporting states. In a competitive market, threats of selective export restrictions would not be taken seriously."

Kuasnicka, Joseph G.
Global interdependence and energy. Federal Reserve Bank of Chicago business conditions, June 1974: 3-7.
Says that the energy crisis brought some fundamental international problems to the forefront; the most obvious were widespread disruptions in trade patterns and balance-of-payments accounts.

Lall, Sham.
Where we stand a year after oil embargo. Journal of commerce, Oct. 17, 1974, p. 2.
"The unexpected quadrupling of oil prices has literally shaken the entire global power structure, and created an economic crisis and uncertainty not known in the postwar era."

Laqueur, Walter. Luttwak, Edward.
Oil. Commentary, v. 56, Oct. 1973: 37-43.
Considers the Arab world's idea of using oil as a political weapon against "imperialism." Examines the nature of the international oil business and the politics of the oil-producing countries themselves.

Lenczowski, George.
The oil-producing countries. Daedalus, v. 104, fall 1975: 59-72.
Identifies and analyzes the similarities and differences between the oil producing countries which are a heterogeneous group in ethnic and political composition.

Levy, Walter J.
An Atlantic-Japanese energy policy. Survey, v. 19, summer 1973: 50-73.
Analyzes the issues and changing relationships posed by energy-oil problems during the next ten years or so and demonstrates the urgent necessity for the establishment of an energy policy for a new Atlantic-Japanese partnership.

Levy, Walter J.
Levy on oil: fear of a clash of interests. Business week, no. 2320, Mar. 2, 1974: 60, 63.
An interview with Walter J. Levy, who fears conflict between the oil-producing and oil-consuming countries could lead to economic disaster for both.

Levy, Walter J.
World oil cooperation or international chaos. Foreign affairs, v. 52, July 1974: 690-713.
Discusses a serious world problem due to recent changes in supply and price conditions of world oil trade. Says energy conservation and cooperation among the oil-importing nations, and an understanding of the interests and aspirations of the producing countries are needed.

Linder, Willy.
The price of oil: a political time bomb. Swiss review of world affairs, v. 24, Feb. 1975: 4-6.
Sketches some of the problems resulting from OPEC's oil price policy since the Arab embargo. Holds that a politically exploitable solidarity among the oil consuming nations is necessary. Otherwise, the price of oil will remain a political time bomb.

Lund, Leonard, ed.
Energy: update and outlook--November 1974. [New York, Conference Board, 1975] 54 p. (The Conference Board. Report no. 663)
Partial contents.--Pt. 1. The oil crisis, one year later; policy and the cartel, by M. A. Adelman.--Scorecard for policy responses, by T. F. Bradshaw.--Pt. 2. Beyond the Project Independence Blueprint: the need for policy, by John C. Sawhill.--Pt. 3. Energy sources and prices, a 10-year outlook: petroleum, natural gas, coal, electric utilities, nuclear fuels.

MacIntosh, R. M.
The oil outlook. Conference Board record, v. 12, Nov. 1975: 41-46.
Provides a long-range view of oil supply and demand, and discusses capital investment problems of OPEC.

Magnus, Ralph.
Middle East oil and the OPEC nations. Current history, v. 70, Jan. 1976: 22-26, 38.
Analyzes OPEC's pricing policies and political solidarity.

Magnus, Ralph H.
Middle East oil. Current history, v. 68, Feb. 1975: 49-53, 86.
"There is certainly a fundamental community of interests, acknowledged on both sides, in the prosperity, stability and strength of the Western world. The difficulty lies in persuading the oil producers that Western stability is endangered before such damage becomes irreparable."

Mancke, Richard B.
The future of OPEC. Journal of business, v. 48, Jan. 1975: 11-19.
Because of accelerating oil supplies from Western Europe, Northern Alaska, and the U.S. offshore, believes the rate of growth in demand for OPEC oil should begin to fall. Because of OPEC's likely near-term future, writer questions the gains expected from a strong commitment to Project Independence.

Marshall, Eliot.
Oiling the way for higher petroleum prices. New republic, v. 173, Aug. 16 & 23, 1975: 21, 24-25.
Author discusses the position the U.S. State Department took concerning oil prices and policy beginning in 1970 and questions why U.S. policy seemingly supported the OPEC countries between 1970 and 1973.

Maull, Hanns.
Oil and influence: the oil weapon examined. London, International Institute for Strategic Studies [1975] 37 p. (Adelphi papers, no. 117)
Contents.--Oil power: a political reality.--Oil power: potential and limitations in the future.--Oil power: the wider context.--Intentions behind the oil weapon.--Conclusions.

McKie, James W.
International energy supply: the political economy of world petroleum. American economic review, v. 64, May 1974: 51-57.
Looks beyond the present oil crisis to consider what we can expect from the world oil economy during the next 15 years or so. Urges reduction in projected demands for imported oil in order to curb exploitation of the Western world, both economically and politically.

McLin, Jon.
Oil, money, and the Common Market. [Hanover, N.H.] American Universities Field Staff [1974] 13 p. (American Universities Field Staff. Fieldstaff reports. West Europe series, v. 9, no. 2 [General])
"There is unprecedented pressure on the EC to be useful, and to be perceived as useful, in resolving concrete economic problems. Grandiloquent talk of 'European Union by 1980' will probably become less prominent, while coordination of national economic policy will command more attention."

Meadows, Dennis L.
Curbing growth; an interview. Business week, no. 2380, May 12, 1975: 58-60.
The principal author of the "The Limits to Growth," talks about the age of scarcity and explains why his earlier warnings are even more relevant today. Comments on oil supply, petroleum prices, and what the U.S. can do about energy.

Merklein, H. A.
The energy crisis: some causes and effects. World oil, v. 178, Feb. 1, 1974: 33-37, 42; Feb. 15: 43-44, 47-48, 50, 52, 54, 56; Mar.: 47-52, 72; Apr.: 91-94.
Part 1. International monetary considerations.--Part 2. A look at the domestic petroleum situation.--Part 3. A look at international oil, the OPEC cartel, and windfall profits.--Part 4. The effect of the decline of U.S. oil resources on the standard of living.

Merklein, H. A.
How world inflation is affecting OPEC nations. World oil, v. 180, June 1975: 53-55.

Merklein, H. A.
Oil and the U.S. economy: a view from the Arab side. World oil, v. 180, May 1975: 90, 94, 96.
Writer speaks of petroleum prices before the Ninth Arab Petroleum Congress. Also, points out some of the misconceptions held by Arab authors concerning the U.S. and the U.S. oil industry.

Meyer, A. J.
Will Mideast oil czars run amok? Christian Science monitor, Mar. 8, 1973, second sec., p. 11.
A leading expert on the economics of oil seeks to put into perspective some misconceptions about what role the major oil-producing nations of the Mideast may play in the current world energy crisis.

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